SAFETY EVALUATION DOSSIER SUPPORTING A GENERALLY RECOGNIZED AS SAFE (GRAS) CONCLUSION FOR THE USE OF CORN BRAN ARABINOXYLAN IN CONVENTIONAL FOODS

SUBMITTED TO:

U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition Office of Food Additive Safety (HFS-200) 5001 Campus Drive College Park, MD 20740

SUBMITTED BY:

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June 07, 2022

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Listing of Exhibits

Exhibit I: Technical Documentation for Corn Bran Arabinoxylan (SFC)

- Exhibit 1-A: SFC Specifications
- Exhibit 1-B: Certificates of Analysis
- Exhibit II: Estimated Daily Intake of Corn Bran Arabinoxylan (Exponent, 2022)
- Exhibit III: GRAS Panel Report

1. SIGNED STATEMENTS AND CERTIFICATION

The current GRAS Notice is hereby submitted in accordance with Title 21 of the U.S. Code of Federal Regulations (CFR), Chapter I, Subchapter B, Part 170, Subpart E to inform the Agency that the proposed uses of corn bran arabinoxylan described herein have been determined to be generally recognized as safe (GRAS) through scientific procedures, and are therefore exempt from the pre-market approval requirements of the Federal Food, Drug, and Cosmetic Act.



June 07, 2022

Date

G. Craig Llewellyn, Ph.D. Principal and Scientific Director Trinity Consultants, Inc. dba SafeBridge[®] Regulatory & Life Sciences Group Agent for AgriFiber Solutions, LLC

A. Name and Address of Notifier

AgriFiber Solutions, LLC 1011 Campus Drive Mundelein, IL 60060

B. Name of GRAS Substance

The subject of this GRAS conclusion is corn bran arabinoxylan (herein also referred to as "Soluble Fiber Corn" or "SFC" and previously identified as "BFG").

C. Intended Use and Consumer Exposure

Corn bran arabinoxylan (SFC) is proposed for use as a formulation aid (binder/gelling agent/texturizer/stabilizer/thickener/emulsifier) and a source of fiber at maximum use levels ranging from 0.75% to 54.3% by weight in a variety of food categories (see Table 5 for details). SFC is intended to be substitutional for similar dietary fiber ingredients used in these food categories. SFC is not intended for use in meat and poultry products, which are under the jurisdiction of the United States Department of Agriculture (USDA), or in infant formula. The worst-case, 90th percentile consumer intake of SFC from AgriFiber's proposed uses is conservatively estimated as 35.3 g/day (providing a dietary fiber intake of up to approximately 32 g/day based on a maximum dietary fiber content of 90%), for the total U.S. population.

D. Basis for GRAS Conclusion

Regulatory Framework

The regulatory framework for determining whether a substance can be considered generally recognized as safe (GRAS) in accordance with section 201(s) (21 U.S.C. § 321(s)) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et. Seq.) (the "Act"), is set forth at 21 CFR §170.30, which states:

"General recognition of safety may be based only on the view of experts qualified by scientific training and experience to evaluate the safety of substances directly or indirectly added to food. The basis of such views may be either (1) scientific procedures or (2) in the case of a substance used in food prior to January 1, 1958, through experience based on common use in food. General recognition of safety requires common knowledge about the substance throughout the scientific community knowledgeable about the safety of substances directly or indirectly added to food.

General recognition of safety based upon scientific procedures shall require the same quantity and quality of scientific evidence as is required to obtain approval of a food additive regulation for the ingredient. General recognition of safety through scientific procedures shall ordinarily be based upon published studies which may be corroborated by unpublished studies and other data and information."

GRAS Conclusion

The basis for the GRAS conclusion for corn bran arabinoxylan (SFC; previously identified as "BFG") is through scientific procedures in accordance with 21 CFR §170.30 (a) and (b).

The criteria stated above are applied herein to determine whether the use of SFC is GRAS for the following intended conditions of use: as a source of dietary fiber, as a formulation aid (e.g., binder and gelling agent), as a texturizer, and as a stabilizer and thickener (e.g., emulsifier) within select foods and beverages.

The entire body of available information relevant to the safety of SFC, including identity, specifications, manufacturing process, probable consumer exposure, toxicology and safety profile, and human clinical study provides a basis upon which to conclude that there is a reasonable certainty that SFC is safe under its intended conditions of use. In addition, because the information supporting safety is widely known and accepted by qualified experts (refer to Exhibit II, GRAS Panel Report), it is concluded that SFC is generally recognized as safe (GRAS) for the intended condition of use described herein. Although the GRAS Panel reviewed a preliminary intake estimate for SFC (previously identified as "BFG"), the refined SFC intake estimates are only moderately increased compared to the estimates reviewed previously by the Panel (i.e., worst-case 90th percentile total population intake of 35.3 g/day versus original estimate of 27.0 g/day for all proposed uses); therefore, the previous conclusions regarding the safety of SFC for its intended use remain valid as reflected in the Panel's original Opinion.

Based upon our findings and knowledge of the information compiled in this dossier, we conclude that SFC is GRAS for the intended conditions of use described herein. To the best of our

knowledge, the current GRAS conclusion is a complete, representative, and balanced assessment that includes unfavorable information, as well as favorable information, known to us and pertinent to the evaluation of the safety and GRAS status of the use of SFC.

E. Availability of Information

Questions or requests for additional information may be directed to: SafeBridge[®] Regulatory and Life Sciences Group, A Trinity Consultants Inc. Company (SafeBridge), 154 Hansen Road, Suite 201, Charlottesville, VA 22911 [contact: G. Craig Llewellyn, Ph.D. (Agent for AgriFiber Solutions, LLC), telephone (434) 977-5957; email: <u>craig.llewellyn@safebridge.com</u>].

2. IDENTITY, METHOD OF MANUFACTURE, SPECIFICATIONS, AND PHYSICAL OR TECHNICAL EFFECT

This section of the GRAS conclusion fulfills the requirements of 21 CFR §170.230 by providing information related to the GRAS material identity, method of manufacture, specifications, and physical or technical effect including product characteristics and analytical data.

A. Trade or Common Name

The subject of this GRAS conclusion is corn bran arabinoxylan (also herein referred to as "Soluble Fiber Corn" or "SFC" and previously identified as "BFG").

B. Chemical Name

Not applicable

C. Synonyms

AgriFiber SFC (soluble fiber corn); SFC; AgriFiber BFG; BFG; corn bran arabinoxylan; corn bran AX; corn bran fiber; corn bran extract; soluble corn bran fiber; soluble corn fiber; vegetable fiber (corn); corn fiber; soluble grain fiber (corn); grain fiber (corn).

D. CAS Registry Number

Not applicable

E. Product Characteristics

Corn bran arabinoxylan (SFC) is a brown to tan powder with a grainy to slightly sweet taste, and neutral odor. SFC has a bulk density between 15-42 lb/cubic foot (depending on the method of drying), a granulation size that passes through U.S. standard 20 mesh, and a viscosity around 500-600 cP (Brookfield HA Viscometer: #5 spindle, 12 rpm, 25°C, 10.00% solids). Specifications for SFC are presented below in Table 1 and included as Exhibit 1-A. Batch analysis results from three non-consecutive batches of SFC (previously identified as "BFG") demonstrating conformance to product specifications, as well as microbial and heavy metals analytical results are provided in Exhibit I-B and summarized in Table 2. Note that the documentation refers to the batch identity slightly differently (e.g., starts the batch code with SFC, BFG, or CBFG), however the same lots of material were analyzed. All analytical methods used to analyze batches of SFC raw material (corn bran) for conformance with the stated parameters in Tables 1 and 3 have been validated and are fit for that particular purpose.

AgriFiber maintains raw material specifications that ensure that every lot of raw agricultural material used to produce SFC (i.e., corn bran) is analyzed for microbial contaminants and heavy metals (lead, arsenic [total], and cadmium), as summarized in Table 3. In addition, the raw materials are routinely analyzed for aflatoxins, vomitoxin, and pesticides. For robust verification, a composite sample of three lots of SFC (previously identified as "BFG") was also analyzed for the presence of a large swath of pesticide parameters; the results of which confirmed that SFC is not contaminated with pesticides (Exhibit 1-B; Eurofins COA dated August 12, 2020).

SFC is expected to be stable and without degradation for at least two years when kept in a sealed container under cool, dry storage conditions.

Analytical Parameter	Units	Acceptable Target/Range	Method of Analysis
Appearance	N/A	Tan – Brown powder	Organoleptic
Odor	N/A	Grainy – Neutral	Organoleptic
Taste	N/A	Grainy – Slightly sweet	Organoleptic
Moisture	%	< 9	Ohaus MB 45, 1 min
Ash	%	< 6	Mod 923.03/942.05, Dried Basis
Total dietary fiber	%	74-90	AOAC 2009.01 AOAC 2011.25
(arabinoxylan)			
Aerobic Plate Count	CFU/g	< 6,000	FDA BAM
Yeast	CFU/g	< 200	FDA BAM
Mold	CFU/g	< 200	FDA BAM
Escherichia coli	CFU/g	< 10	FDA BAM
Coliform	CFU/g	< 10	AOAC 991.14
Salmonella	/25 g	Negative	FDA BAM

Table 1. Specifications for Corn Bran Arabinoxylan (SFC)

Association of Official Agricultural Chemists (AOAC); Colony-forming unit (CFU); Food and Drug Administration Bacteriological Analytical Method (FDA BAM); gram (g); not applicable (N/A)

Parameter	Units	Specification /	Sample ID:	Sample ID:	Sample ID:	Method
		Acceptable Target*	SFC.948879.01 (previously identified as BFG.948879.01 or CBFG2-948879.01)	SFC.948179.01 (previously identified as BFG.948179.01 or CBFG2-948179.01)	SFC.948779.01 (previously identified as BFG.948779.01 or CBFG2-948779.01)	
Appearance ¹	N/A	Tan – Brown powder	Light brown powder	Light brown powder	Light brown powder	Organoleptic
Odor ¹	N/A	Grainy – Neutral	Neutral	Neutral	Neutral	Organoleptic
Taste ¹	N/A	Grainy – Slightly sweet	Slightly sweet	Slightly sweet	Slightly sweet	Organoleptic
Moisture ¹	%	< 9	8.60	4.41	4.81	Ohaus MB 45, 1 min
Ash ²	%	< 6	4.71	5.29	4.58	Mod 923.03/942.05 Dried Basis
Total dietary fiber (arabinoxylan) ²	%	74-90	79.56	78.53	81.61	AOAC 2009.01 AOAC 2011.25
Aerobic Plate Count ¹	CFU/g	< 6,000	5,100	4,800	1,200	FDA BAM
Yeast ¹	CFU/g	< 200	< 10	< 10	< 10	FDA BAM
Mold ¹	CFU/g	< 200	< 10	< 10	< 10	FDA BAM
Escherichia coli ¹	CFU/g	< 10	< 10	< 10	< 10	FDA BAM
Coliform ¹	CFU/g	< 10	< 10	< 10	< 10	AOAC 991.14
Salmonella ¹	/25 g	Negative	Negative	Negative	Negative	FDA BAM
Clostridium perfringens ³	CFU/g	< 10*	< 10	< 10	< 10	FDA BAM 8 th Edition Chap 16
Aflatoxin ELISA ³	ppb	< 5.0*	< 5.0	< 5.0	< 5.0	AOAC RI-05091
Lead ³	ppm	< 0.10*	< 0.10	< 0.10	< 0.10	AOAC 985.01 Modified (ICP-MS)
Arsenic (Total) ³	ppm	< 0.10*	< 0.10	< 0.10	< 0.10	AOAC 985.01 Modified (ICP-MS)
Cadmium ³	ppm	< 0.10*	< 0.10	< 0.10	< 0.10	AOAC 985.01 Modified (ICP-MS)

Table 2. Analytical Results on Three Nonconsecutive Lots of Corn Bran Arabinoxylan (SFC)

Note: AgriFibers' Corn Bran Arabinoxylan (SFC) was previously identified internally as "BFG" which accounts for the minor differences in batch identification on the COAs.

¹ Results from AgriFiber's certificates of analysis (COAs) dated June 25, 2020. ² Results from Eurofins' COAs dated November 09, 2020.

³ Results from Deibel Laboratories COAs dated June 25, 2020.

* Acceptable Target for parameters not in SFC Specifications but monitored periodically and/or monitored in the raw material.

Analytical Parameter	Units	Acceptable Target/Range	Method of Analysis
Aerobic Plate Count	CFU/g	< 25,000	FDA BAM
Yeast	CFU/g	< 1,000	FDA BAM
Mold	CFU/g	< 1,000	FDA BAM
Escherichia coli	CFU/g	< 10	FDA BAM
Coliform	CFU/g	< 100	AOAC 991.14
Salmonella	/25 g	Negative	FDA BAM
Deoxynivalenol (DON; Vomitoxin)	ppm	< 10	Lateral flow test (LFT) (EnviroLogix)
Aflatoxin	ppb	< 20	Lateral flow test (LFT) (EnviroLogix)
Fumonisin	ppm	< 4	Lateral flow test (LFT) (EnviroLogix)
Lead	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)
Arsenic (Total)	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)
Cadmium	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)

Table 3. SFC Raw Material (Corn Bran) Specifications

F. Product Composition

Corn bran arabinoxylan (SFC) is a hemicellulose primarily comprised of water soluble arabinoxylan. SFC is prepared by an alkali-hydrothermal process that fractionates corn bran lignocellulosic material, followed by enzymatic (endo- β -1,4-xylanase) hydrolysis that produces lower molecular weight fragments of arabinoxylan. As a non-starch polysaccharide, arabinoxylans are naturally occurring dietary fibers that are abundant in the cell wall of monocotyledonous plants in the family *Poaceae* (formally known as *Gramineae*) (Kale *et al.*, 2018; Izydorczyk and Biliaderis, 2007). They are a major component of fibers within cereal grains, such as corn, wheat, rye, rice, sorghum, and millet, as well as other grasses, such as psyllium, flax, sugarcane, and bamboos, and therefore, arabinoxylans constitute an important portion of the dietary fiber consumed by humans (Izydorczyk and Biliaderis, 2007). The structural commonality among arabinoxylans is the linear β -(1,4) linked D-xylopyranose backbone with α -L-arabinofuranose residues as side chains (Zannini *et al.*, 2022; He *et al.*, 2021). The additional presence of ferulic acid and sugars, such as galactose and glucuronic acid, in the side chains also imparts a large degree of structural heterogeneity (Serra *et al.*, 2020; Kale *et al.*, 2018).

SFC is a corn bran arabinoxylan that contains a minimum 74% dietary fiber, with around 95% of the fiber consisting of higher molecular weight arabinoxylan with an average degree of polymerization (DP) around 2,500 (as assessed by high-performance size-exclusion chromatography with multi-angle laser light scattering; Table 4). The remining 5% of the fiber

content consists of lower molecular weight arabinoxylan with an average DP around 20, which stems from the use of an endo- β -1,4-xylanase to achieve target hydrolysis (as assessed by anionexchange chromatography; Table 4). The neutral monosaccharide composition of SFC is comprised of around 49% xylose, 43% arabinose, and 8% galactose (total weight of neutral monosaccharides) (Table 4). While xylose provides the backbone of corn bran arabinoxylan, arabinose forms the branching points with galactose present in the side chains. The molecular structure of corn bran arabinoxylan (SFC) is shown in Figure 1. The product exhibits an arabinose-to-xylose ratio around 0.84 to 0.88 (Table 4 [analysis by alditol acetate method]) with sections of the arabinoxylan chain further substituted with ferulic acid and glucuronic acid, which is indicative of a heavily branched structure with complex side chains (Xu et al., 2022; Nguyen et al., 2020; Kale et al., 2018; Hamaker and Tuncil, 2014, Rose, et al., 2010; Izydorczyk and Biliaderis, 2007; Saulnier et al., 1995a). The arabinose-to-xylose ratio is noted to vary (e.g., typically from 0.3 to 1.1) among arabinoxylans derived from different grain species (Izydorczyk and Biliaderis, 2007; Rose et al., 2010) (discussed further below in Section 6). In addition, variations in analytical methodology may yield slightly different values for arabinose-to-xylose ratio (i.e., 0.56 reported in Nguyen et al., 2020 for SFC analyzed by the TMS-methylglycoside method). The alditol acetate and TMS-methylglycoside methods are both validated and supported by extensive literature for determining the monosaccharide composition of fibers (Biswal et al., 2017). These methods are summarized further in Table 4 below.

As shown in Table 4, uronic acids comprise approximately 17% of the SFC ingredient, which is in the range of uronic acid residues found in other dietary fiber sources (e.g., 4.4% in wheat bran, 6.5% in apple, 11.1% in carrot, 22.4% in potato fiber (Theander *et al.*, 1995)). The total amount of free and bound ferulic acid in SFC as determined from analysis of representative samples was $\leq 1.2\%$ (AgriFiber 2021; *unpublished data on file*) (see safety discussion in Section 6).

The additional analytical methods cited for the SFC nutritional parameters in Table 4 have also been validated for that particular purpose.

G. Molecular and Structural Formula

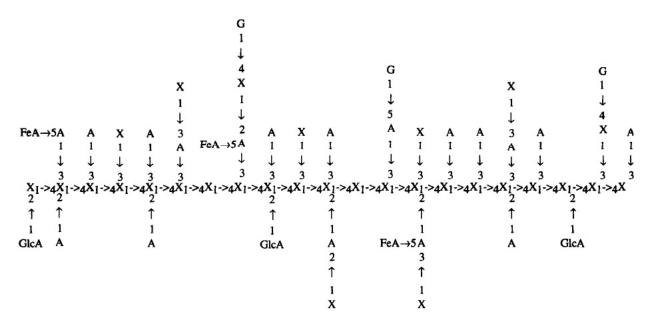


Figure 1. Molecular Structure of Corn Bran Arabinoxylan (SFC). A, L-arabinose; X, D-xylose; G, galactose; GlcA, glucuronic acid; FeA, ferulic acid. Figure adapted from Saulnier *et al.*, 1995c.

	SFC Sample ID (previously identified as "BFG") ¹			A I M4h J
	948179	948779	948879	Analysis Method
Composition of carbohydrat	es ²			
	Monosaccharide C	omposition		
Xylose (%)	20.5 ± 2.5	20.8 ± 1.8	21.8 ± 3.0	
Arabinose (%)	18.1 ± 2.4	18.4 ± 1.3	18.4 ± 3.3	
Galactose (%)	3.3 ± 0.5	3.5 ± 0.5	3.4 ± 1.6	AACC 32-25 (alditol
Glucose (%)	< 1	< 1	< 1	acetate method)
Uronic Acids (%)	17.5 ± 1.5	16.6 ± 0.9	17.6 ± 0.1	
Lignin (%)	< 1	< 1	< 1	
Relativ	e Percentages of Neut	ral Monosaccharide ³		
Xylose (relative %)	48.9	48.7	50.0	
Arabinose (relative %)	43.2	43.1	42.2	
Galactose (relative %)	7.9	8.2	7.8	AACC 32-25 (alditol
Arabinose to xylose ratio ⁴	0.88	0.88	0.84	acetate method)
Galactose to xylose ratio ⁴	0.16	0.17	0.16	
Degree of polymerization ⁵				
95% of corn bran arabinoxylan	$2,753 \pm 295$	$2,195 \pm 34$	$2,077 \pm 359$	High-performance size-exclusion chromatography with multi-angle laser light scattering
5% of corn bran arabinoxylan	24 ± 0	20 ± 0	17 ± 0	Anion-exchange chromatography
Nutritional analysis ⁶				
Estimated KCAL per 100g	201	207	206	Atwater calculation
Total triglycerides (%)	1.16	1.22	0.98	
Saturated fat (%)	0.52	0.53	0.48	
Monounsaturated fat (%)	0.38	0.42	0.33	AOAC 996.06
Polyunsaturated fat (%)	0.17			

Table 4. Corn Bran Arabinoxylan (SFC) Monosaccharide Composition and Nutritional Analysis

GRAS CONCLUSION FOR CORN BRAN ARABINOXYLAN (SFC)

Protein (%)	5.75	5.56	5.19	AOAC 990.03
Nitrogen (%)	0.92	0.89	0.83	and 992.15
Carbohydrates (%)	81.96	84.97	84.28	CFR 21 calculation
Total sugars (%)	< 0.35	< 0.35	< 0.35	AOAC 982.14
Total dietary fiber (%)	78.53	81.61	79.56	
Soluble dietary fiber (%)	76.88	80.27	78.86	AOAC 2009.01 and 2011.25
Insoluble dietary fiber (%)	1.65	1.34	0.70	
Moisture (%)	5.84	3.67	4.84	AOCS Ca 2e-84
Ash (g/100g)	5.29	4.58	4.71	AOAC 942.05
Calcium (g/100g)	0.19	0.21	0.21	
Iron (g/100g)	0.02	0.002	0.003	AOAC 984.27, 927.02, 985.01, and 965.17
Potassium (g/100g)	0.06	0.06	0.05	
Sodium (g/100g)	1.98	1.63	1.68	

AACC: American Association of Cereal Chemists; AOAC: Association of Official Analytical Collaboration; AOCS: American Oil Chemists' Society

¹ Samples 948179, 948779, and 948879 were from non-consecutive lots isolated from the same raw corn bran material.

² Samples were analyzed by The Whistler Center for Carbohydrate Research (*unpublished report maintained on file with AgriFiber*) via the alditol acetate method (described below).

- 1) Samples are treated with acid to hydrolyze the polymers into the component glycosyl residues (i.e., individual monosaccharides).
- 2) Samples are treated with a reducing agent like sodium borohydride to reduce the aldehyde group to a hydroxyl group. The samples now consist of linear polyalcohols, such as glucitol from glucose.
- 3) Samples are treated with acidic anhydride and pyridine to acetylate the free hydroxyl groups and convert the polyalcohols to volatile alditol acetates, which can be separated and quantified by GC. This approach is typically applied as it is effective and the GC analysis only yields one peak for each monosaccharide in the sample (i.e., one peak for arabinose, xylose, and galactose), which makes the resulting GC chromatogram and integration values easy to identify and interpret.

³ Relative percent refers to percent of total neutral monosaccharides (i.e., xylose, arabinaose, and galactose).

⁴ Ratio determined from neutral monosaccharide content (i.e., xylose, arabinaose, and galactose), exlcuding uronic acids. A slightly different A:X ratio (i.e., 0.56) was reported in Nguyen *et al.*, 2020 for SFC analyzed by the TMS-methylglycoside method (described below).

- 1) Samples are treated with methanolic-HCl, which both hydrolyzes the polymers and forms a relatively stable methyl ester with the aldehyde group. This yields methyl-glycosides in the ring form but with several variants that represent the equilibrium distribution of monosaccharides in solution (e.g., α and β forms of the monosaccharides).
- 2) Samples are treated with a trimethylsilyl (TMS) reagent to attach a TMS group to each of the free hydroxyls, yielding volatile TMS-methylglycosides in the various ring forms. Therefore, the resulting gas chromatography (GC) chromatogram would have multiple peaks for each monosaccharide, with the areas of these peaks being consistent from analysis to analysis. With external standards the peaks can be identified and quantified.

⁵ Samples were analyzed by The Whistler Center for Carbohydrate Research (*unpublished report maintained on file with AgriFiber*). Around 95% of corn bran arabinoxylan (SFC) consists of higher molecular weight arabinoxylan with an average DP between 2,000-2,800. The remining 5% of SFC consists of lower molecular weight arabinoxylan with an average DP between 17-24, which stems from the targeted hydrolysis of corn bran arabinoxylan with an endo- β -1,4-xylanase.

⁶ Samples were analyzed by Eurofins Scientific (COAs dated November 09, 2020; Exhibit I-B).

H. Production Process

Corn bran arabinoxylan (SFC) is produced in accordance with current Good Manufacturing Practice and meets the requirements of the SQFI Food Safety Code for Food Manufacturing (Edition 9).

The initial manufacturing process is the same as described in GRAS Notice (GRN) 427 (FDA, 2012) for corn hull fiber, in which the starting material, corn bran, is subjected to an alkalihydrothermal process to disintegrate the cellular structures of the dietary fiber substances. The corn bran is first hydrated using hot water to form a slurry and then the pH is adjusted as necessary to reach a pH between 5 and 7.5. Once food grade α -amylase is added for destarching and sodium hydroxide is added, the reaction proceeds until a designated viscosity is reached. Whereas the insoluble corn hull fiber is obtained from the dried and milled suspension, the supernatant and wash water solids are further processed into the soluble corn bran arabinoxylan (SFC).

All raw materials and processing aids used to manufacture SFC are food-grade ingredients in compliance with U.S. regulations, and/or have previously been determined to be GRAS for their respective uses.

Manufacturing flow diagrams of the process for SFC are provided in Figure 2. In the first step of the process, as shown in Figure 2A, all the supernatants from the production of corn hull fiber, as in from Wash No. 1 and Wash No. 2, are combined together in a collection tank, and then the following additions are made to perform an enzyme treatment:

- Hydrochloric acid addition for pH adjustment to approximately neutral,
- Enzyme addition (endo- β -1,4-xylanase) to achieve target hydrolysis, and
- Water addition to achieve the target solids.

Endo- β -1,4-xylanase is produced via a genetically modified *Trichoderma reesei* strain and is GRAS for use as an enzyme in grain processing, including corn, as described in GRN 628 (FDA, 2016b). Furthermore, endo- β -1,4-xylanase complies with the recommended purity specifications for food-grade enzymes as given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC). According to GRN 628 (p. 45), heating the enzyme at temperatures greater than 90 °C will inactivate it. During subsequent SFC manufacturing processes (e.g., drying) the enzyme is exposed to temperatures >90 °C and as such, the enzyme is denatured and not expected to be active in the final food.

As shown is Figure 2B, the supernatant is then filtered through a food grade ultrafiltration membrane, which concentrates the solution into a process tank while the permeate from the

process is discarded. The physicochemical properties of the ultrafiltrated and concentrated sample (e.g., viscosity and pH) are then evaluated before additional purification processes using diafiltration. The concentrate is then subjected to food grade diafiltration to further purify the concentrate. The permeate from this process is also discarded.

From the process tank, the material is pumped into the dryer feed tank, as shown in Figure 2C. For select functional applications, a food grade acid (e.g., citric acid) may also be added to the tank in order to adjust the pH of the final material prior to drying. Once all the material is transferred to the tank, the drying process is initiated by using either a double drum dryer or a spray dryer. From the drum dryer, the dried material is further milled and sieved, prior to being packaged and demagnetized.

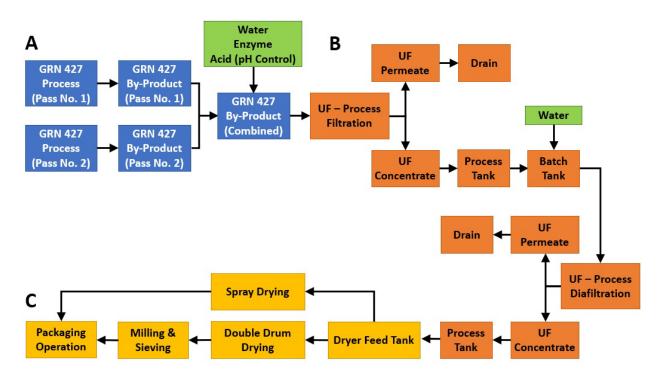


Figure 2. Manufacturing Process for Corn Bran Arabinoxylan (SFC). A) Initial manufacturing process that has been described in GRAS Notice (GRN) 427 for corn hull fiber (FDA, 2012). **B)** Ultrafiltration (UF) and diafiltration processing of the supernatants obtained from GRN 427. **C)** Drying, milling, and packaging of the concentrated material.

I. Physical or Technical Effect

Corn bran arabinoxylan (SFC) is intended for addition to conventional foods for which no standard of identity exists, or for which the standard of identity would allow for such addition of SFC, as a source of dietary fiber, as a formulation aid (e.g., binder or gelling agent) (21 CFR 170.3(o)(14)), as a texturizer (21 CFR 170.3(o)(32)), and as a stabilizer and thickener (e.g., emulsifier) (21 CFR 170.3(o)(28)).

3. DIETARY EXPOSURE

This section of the GRAS conclusion fulfills requirements of 21 CFR § 170.235 in regard to the dietary exposure of corn bran arabinoxylan (SFC) as a result of its intended uses and use levels in a variety of foods.

A. Intended Uses and Use Levels

Corn bran arabinoxylan (SFC) is proposed for use as formulation aid (texturizer/binder/gelling agent/stabilizer/thickener/emulsifier) and/or a source of dietary fiber in a variety of food and beverage categories as listed in Table 5 below. SFC is not intended for use in infant formula, applications under the jurisdiction of USDA, or in specific products for which U.S. Standards of Identity do not permit such use.

Food use type	Summary of NHANES food selection	SFC maximum use level (%)
Baked goods and baking mixes	Yeast breads, rolls and buns, tortillas, bagels, English muffins, biscuits, muffins, quick breads, cakes and pies, cookies and brownies, pancakes, waffles, French toast, doughnuts, sweet rolls, pastries	3.8 g/serving (3 - 54.3%) ^a
Beverages and beverage bases	Fruit drinks and fruit flavored drinks, energy drinks	1.0%
Cheese	All cheeses, including cottage/ricotta cheese, cream cheese, cheese spreads, soybean curd cheese, and imitation cheese	0.75%
Chocolate and non- chocolate candies and confections	Candy containing and not containing chocolate including chewing gum	1.0%
Coatings and Breadings for meat, poultry, and vegetables	All coatings and breadings for meat, poultry, fish, and vegetables	2.0%
Custards, puddings, and gelatin desserts	Custards, puddings, flan, mousse, and gelatin desserts	3.0%
Dairy products	Cream and cream substitutes (e.g., half and half, heavy cream, coffee creamer), sour cream, and whipped cream	1.5%
Dips	All dips including chipotle dip, dill dip, ranch dip, spinach dip, tzatziki dip, onion dip, seafood dip, salsa, guacamole, hummus, bean dip, layer dip, cheese dip, caramel dip, and dessert dip	3.0%
Egg Products	Egg substitute omelets, scrambled, or fried; egg casserole/souffle, quiches, and egg foo young	1.5%

Table 5. List of Food and Beverage Categories Proposed for Use with SFC

Food use type	Summary of NHANES food selection	SFC maximum use level (%)
Filling, baked goods	Fillings in cakes and pies, cupcakes, cookies, pastries, doughnuts, and breakfast bars	3.0%
Flavored and non- flavored soy milk	Flavored and non-flavored soy milk	1.5%
Flavored milk and milk drinks, fluid	Flavored milk and milk drinks including chocolate milk, hot chocolate, strawberry milk, eggnog, kefir, malted milk, and bottled or prepared milk shakes	1.5%
Frozen dairy desserts	Ice cream and ice cream novelties, frozen yogurt, gelato, sherbet	1.0%
Grain products and pastas (such as breakfast / nutrition / cereal bars and pasta)	Cereal/nutrition bars, all pasta and noodles (cooked)	3.8 g/serving (2.7 – 9.5%) ^a
Gravies	Gravies, all types	3.0%
Isotonic beverages (such as fluid meal replacement drinks and sports drinks)	Sports drinks and fluid replacement (i.e., Pedialyte)	1.0%
Juice drinks and punch (powdered concentrates and ready-to-drink (RTD))	Fruit juice drinks and nectars	1.0%
Coffee and tea (dry mix and RTD)	Coffees and teas, including bottled/canned, instant, or non-specified (NS)	1.5%
Plant-based dairy alternatives	Milk substitutes including almond, coconut, rice milk; non-dairy frozen dessert; non-dairy yogurt; soy milk is captured in 'flavored and non-flavored soy milk' category	1.5%
Plant-based meat substitutes	Meatless frankfurters, bacon, chicken, luncheon slice, meatball, vegetarian burger	2.0%
Processed fruits and fruit juices	100% fruit juices, dried fruits, canned and frozen fruits	1.0%
Processed vegetables and vegetable juices	Vegetable juices; all canned, frozen, pickled, and dried vegetables. Excludes legumes.	1.0%
RTD milk-based and non-dairy meal replacements and adult nutrition products (such as Ensure® Nutrition Shakes)	Nutritional beverages	3.8 g/serving (1.6%)

Food use type	Summary of NHANES food selection	SFC maximum use level (%)
Ready-to-eat (RTE) cereals	All RTE cereals such as puffed rice, General Mills Cheerios, Quaker Cap'n Crunch, Kellogg's All-Bran, General Mills Fiber One, Post Shredded Wheat)	3.8 g/serving (6.3 – 25.3%) ^a
Salad dressings	Salad dressings, including mayonnaise	3.0%
Sauces	Pasta sauce, pizza sauce, cheese sauce, cream sauce, barbecue sauce, hollandaise sauce, tartar sauce, tomato chili sauce, mustard sauce, sweet and sour sauce, garlic sauce, lemon-butter sauce	3.0%
Smoothies and grain drinks	Smoothies and grain drinks, all types	3.8 g/serving (1.6%) ^a
Snack foods	Crackers, popcorn, pretzels/snacks mix, potato chips, tortilla chips, and other chips	3.8 g/serving (12.7%) ^a
Soups	Soups including RTE, condensed, and dry soups	3.0%
Yogurt	Regular and Greek yogurt, all types and flavors	3.0%

^a Based on a food serving which corresponds to the gram weight, cup weight, or milliliter (mL) volume as specified by the Reference Amounts Customarily Consumed (RACCs) as cited in FR Vol 81, No. 103, Friday, May 27, 2016, pp 34000-47. Available at: <u>https://www.govinfo.gov/content/pkg/FR-2016-05-27/pdf/2016-11865.pdf</u>. Serving size as a volume measure (e.g., cup, mL, tbsp) assumed that 1 mL=1g.

B. Estimated Daily Intake from Intended Uses

The estimated daily intake (EDI) of corn bran arabinoxylan (SFC) was calculated by Exponent Inc. based on food consumption data from foods reported consumed in the What We Eat in America (WWEIA) dietary component of the National Health and Nutrition Examination Surveys (NHANES) 2015-2018. Individual food codes selected for inclusion in each proposed use category are provided in Exhibit II (Exponent, 2022).

The NHANES 2015-2018 (USDA, 2018, 2020) is a complex multistage probability sample designed to be representative of the civilian U.S. population. The survey collects two days of food intake data, in addition to nutrition, demographic, and health information. Exponent Inc. used the statistically weighted values from the survey in the analyses. The statistical weights compensate for variable probabilities of selection, adjust for non-response, and provide intake estimates that are representative of the U.S. population and the selected age-gender subgroups.

Exponent Inc. estimated the daily intake on a per "user" basis. In this analysis, a "user" is anyone who reported consuming at least one food category listed in Table 5 ("SFC food") on either of the survey days, i.e., United States Department of Agriculture's (USDA's) "user" definition. Each individual who reported consuming an SFC food on either of the survey days was identified, and that individual's responses for both survey days was used. Because SFC foods may be consumed over a lifetime it is appropriate to average exposures over a longer period than one day. Therefore, Exponent Inc. used each respondent's food consumption averaged over the two days of the NHANES 2015-2016 and 2017-2018 surveys. A 2-day average typically overestimates lifetime average daily intake especially for foods/beverages consumed

infrequently; however, only two nonconsecutive days' worth of food/beverage consumption data are available in the most recent NHANES 2015-2016 and 2017-2018 surveys database. It is well known that food/beverage consumption data collected over longer periods of time, e.g., 14 days as in Market Research Corporation of America (MRCA) consumer surveys, yield estimates of daily intake that may be significantly lower than 2-day averages (Lambe *et al.*, 2000). Therefore, actual consumer exposures to SFC are anticipated to be lower than the estimates reported herein.

The EDI of SFC (corn bran arabinoxylan) was calculated by multiplying the Mean and 90th percentile daily intakes for various food categories by the maximum proposed use levels for SFC in Table 5 (i.e., 0.75% to 54.3% w/w). The per user results are presented in Table 6 below. The mean and 90th percentile per user consumption of SFC for the total U.S. population is estimated at approximately 0.35 g/kg bw/day (21.6 g/day) and 0.73 g/kg bw/day (35.3 g/day), respectively. Estimated 90th percentile per user intake among population subgroups ranges from 0.45 to 1.64 to 25.9 g/kg bw/day (27.2 to 35.9 g/day) (Table 6). Due to the conservative nature of the exposure estimation model, actual daily intake of SFC from the proposed use in various food categories is expected to be much lower.

			Intake of SFC (g/day)		Intake of SFC (g/kg bw/day)	
Population	Unweighted Users ¹	% Users	Mean	90th Percentile	Mean	90th Percentile
Total U.S. Population (≥1 year)	13,048	100	21.6	35.3	0.37	0.73
Children (1-5 years)	1336	100	16.9	27.2	1.06	1.64
Children (6-12 years)	1744	100	23.5	34.8	0.71	1.15
Adolescents (13-18 years)	1433	100	23.0	35.9	0.36	0.62
Adults (≥19 years)	8535	100	21.6	35.7	0.27	0.45

Table 6. Per User Estimated Daily Intake of SFC from Proposed Uses

¹ Un-weighted number of users; % user, per capita, and per user estimates were based on NHANES 2015-2018 and derived using the statistical weights provided by the NCHS.

C. Cumulative Intake Assessment of Dietary Fiber

SFC contains 74% to 90% total dietary fiber (see Table 1) and is intended to be substitutional for similar dietary fiber ingredients in foods and beverages as consumed. Therefore, a cumulative exposure estimate for dietary fiber from background plus proposed uses of SFC is not applicable. For reference, the mean and 90th percentile dietary exposure estimates for dietary fiber from all foods and beverages intended to contain SFC were calculated using the maximum dietary fiber content of SFC, i.e., 90%, and EDIs of SFC from maximum proposed use levels presented in Table 6 (see Table 7 for dietary fiber exposure estimates).

			Intake of dietary fiber (g/day)		Intake of dietary fiber (g/kg bw/day)	
Population	Unweighted Users ¹	% Users	Mean	90th Percentile	Mean	90th Percentile
Total U.S. Population (≥1 year)	13,048	100	19.44	31.77	0.33	0.66
Children (1-5 years)	1336	100	15.21	24.48	0.95	1.48
Children (6-12 years)	1744	100	21.15	31.32	0.64	1.04
Adolescents (13-18 years)	1433	100	20.70	32.31	0.32	0.56
Adults (≥19 years)	8535	100	19.44	32.13	0.24	0.41

 Table 7. Per User EDI of Dietary Fiber from All Proposed Uses of SFC

¹ Un-weighted number of users; % user, per capita, and per user estimates were based on NHANES 2015-2018 and derived using the statistical weights provided by the NCHS.

As described in GRN 343 [FDA, 2010], the background dietary consumption of arabinoxylan was estimated from the intake of refined or whole grain ready-to-eat cereals was determined as 1.1-3.6 g/person/day (mean) and 2.0-6.8 g/person/day (90th percentile), based on USDA, CSFII consumption data for ready-to-eat cereals (Smiciklas-Wright *et al.*, 2002) and considering an average arabinoxylan content of 1.9% in refined cereals (Gebruers *et al.*, 2008 [*Table 2 data for wheat flours*]) and 6.5% in wholegrain cereals (Hong *et al.*, 1989; Saulnier *et al.*, 1995b). The proposed use of SFC in fortified ready-to-eat cereals (3.8 g SFC/serving [up to 3.4 g fiber as arabinoxylan/serving]) yielded mean and 90th percentile intake estimates of 3.0 and 5.7 g/day [2.7 and 5.1 g fiber as arabinoxylan/day] among the total population (Exhibit II, Table 3), which are consistent with these background exposure estimates specifically for arabinoxylan from cereal. Because SFC is substitutional for other dietary fiber ingredients, cumulative intake of arabinoxylan is not expected to increase from proposed uses of SFC.

D. Discussion

As an arabinoxylan, SFC meets the FDA's expanded definition of dietary fiber that includes arabinoxylan as one of the "Additional Isolated Non-Digestible Carbohydrates" (FDA, 2018). The FDA Recommended Daily Value (RDV) for dietary fiber is 28 g/day (FDA, 2020) and the Adequate Intake (AI) levels for fiber recommended by the Institute of Medicine (IOM) are 25 g per day for adult women and 38 g per day for adult men (IOM, 2002/2005). However, it is reported that Americans consume only one half of the recommended levels of fiber, at intakes around 15.9 g/day (King *et al.*, 2012); thus, the addition of SFC to foods and beverages will help to achieve recommended fiber intakes.

As discussed further in Section 6 (GRAS Narrative), SFC (previously identified as "BFG") was determined to be safe and well tolerated at repeated daily doses of 25 g (females) or 35 g (males), the highest tested doses, for 6 weeks (Deehan *et al.*, 2022; Nguyen *et al.* 2020; Deehan *et al.*, 2022 [*manuscript in preparation*]; Deehan *et al.*, 2021 [*unpublished report*]). As with

other fermentable dietary fibers (Grabitske and Slavin, 2009; Kaur *et al.*, 2018; Koecher *et al.*, 2014; Livesey, 2001; Rumpagaporn *et al.*, 2015; IOM, 2002/2005), consumption of SFC at these high daily doses intensified gastrointestinal (GI) symptoms. However, effects were mild and transient, with ratings returning to baseline levels during weeks 4 to 6 (Deehan *et al.*, 2022 [*manuscript in preparation*]; Deehan *et al.*, 2021 [*unpublished report*]). No serious adverse events were observed in the SFC study group. In terms of non-serious adverse events, one individual consuming SFC (as well as one individual consuming the microcrystalline cellulose control) reported constipation within the first two weeks of the study, resulting in their withdrawal from the study (Nguyen *et al.* 2020; Deehan *et al.*, 2021 [*unpublished report*]). The IOM recognizes that "while occasional adverse gastrointestinal symptoms are observed when consuming one of the isolated or synthetic fibers, serious chronic adverse effects have not been observed. Furthermore, due to bulking effects of fibers, excess consumption is likely to be self-limiting" (IOM, 2002/2005). Therefore, an UL (Tolerable Upper Intake Level) was not set by IOM for these individual fibers.

In conclusion, even worst-case, conservatively estimated intake of SFC from proposed uses (i.e., up to 35.3 g/day, providing a dietary fiber intake of up to approximately 32 g/day) is considered to be safe.

This section of the GRAS conclusion fulfills requirements of 21 CFR §170.240 by providing information about any self-limiting characteristics of corn bran arabinoxylan (SFC) use.

There are no known self-limiting use levels of SFC for its intended use as a source of dietary fiber, as a formulation aid (e.g., binder and gelling agent), as a texturizer, and as a stabilizer and thickener (e.g., emulsifier) within select foods and beverages.

5. EXPERIENCE BASED ON COMMON USE IN FOOD BEFORE 1958

General recognition of safety for the notified substance, corn bran arabinoxylan (SFC), is established through scientific procedures; therefore, information regarding experience based on common use of the notified substance in food prior to 1958 is not applicable.

6. BASIS FOR CONCLUSION OF GRAS STATUS FOR CORN BRAN ARABIONOXYLAN (SFC) (NARRATIVE)

This section of the GRAS dossier fulfills the requirements of 21 CFR §170.250 by providing a narrative in regards to generally available and accepted scientific data, information, methods, or principles that are relied on to establish safety.

A. Introduction

The subject of this GRAS conclusion, corn bran arabinoxylan (SFC, previously identified as "BFG"), is a soluble arabinoxylan (AX) isolated from corn bran.

AXs are a constituent of dietary fiber belonging to the broad category of non-starch polysaccharides and specifically hemicelluloses (Serra et al., 2020; Grootaert et al., 2007; FDA, 2018). They are one of the main dietary fibers found in the cell walls of cereal grains, such as corn, wheat, rye, rice, sorghum, and millet, as well as other grasses, such as psyllium, flax, sugarcane, and bamboos (Izydorczyk and Biliaderis, 2007). AXs consist of a β -(1,4)-linked Dxylopyranose backbone to which α -L-arabinofuranose residues are attached as side chains (Zannini et al., 2022; He et al., 2021; Serra et al., 2020; Kale et al., 2018; Grootaert et al., 2007; FDA, 2018; EFSA, 2011). Some AXs are also substituted with ferulic acid and other phenolic compounds that are covalently linked (Grootaert et al., 2007; EFSA, 2011). A large degree of structural heterogeneity is imparted by the presence of other sugar moieties, including xylose, galactose, and glucuronic acid in the branches (Kale et al., 2018). The structural complexity of AX varies greatly by source. For instance, rice and sorghum AXs have relatively simple structures (widely distributed, single sugar arabinose branches), while corn bran AXs have highly branched and very complex structures (Xu et al., 2022; Nguyen et al., 2020; Kale et al., 2018; Hamaker and Tuncil, 2014; Rose, et al., 2010; Izydorczyk and Biliaderis, 2007; Saulnier et al., 1995a).

As discussed further below, AXs are degraded in the colon by specialized microbes that encode AX-degrading glycosidase, such as β -xylosidase and α -arabinofuranosidase, within their genomes (Nguyen *et al.*, 2020). Degradation of AX by these microbes releases arabinoxylan oligosaccharides (AXOS) as the major hydrolysis product, as well as xylooligosaccharides (XOS) and individual sugar moieties (i.e., arabinose and xylose), for further degradation by secondary fermenters (Grootaert *et al.*, 2007; Broekaert *et al.*, 2011; Nguyen *et al.*, 2020). Therefore, the regulatory status and safety profile of AXOS and XOS are considered relevant to the GRAS assessment of corn bran AX (SFC).

In 2018, the US FDA included AX among the list of eight additional non-digestible carbohydrates that meet the Agency's definition of dietary fiber, including AX alone or as a constituent of mixed plant cell wall fiber ingredients isolated from cereal grains, along with celluloses, pectins, lignins, and/or β -glucans. FDA's decision to include AX in the definition of dietary fiber was supported by the strength of the evidence demonstrating that AX can induce

beneficial physiological effects on blood glucose and insulin levels (FDA, 2018). The EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) similarly concluded that a cause-and-effect relationship has been established between the consumption of wheat endosperm derived AX and reductions in post-prandial glycaemia; thus, advising that 8 g of AX-rich fiber produced from the wheat endosperm per 100 g of available carbohydrates should be consumed by individuals who wish to reduce their post-prandial glycemic response (EFSA, 2011). The human clinical studies reviewed by FDA and EFSA are summarized below in "Clinical Safety Evidence for Corn Bran Arabinoxylan (SFC)".

Several GRAS Notifications for isolated plant cell wall fibers have been submitted to FDA. These include GRAS Notices Nos. 373 (rice bran fiber), 427 (corn hull fiber), 430 (sugar beet fiber), 478 (rice hull fiber), 525 (pea fiber), and 599 (citrus fiber), all of which have received FDA Letters of No Questions (FDA, 2011, 2012, 2013a, 2014, 2015, 2016a). In addition, GRAS Notifications for AXOS and XOS (the major hydrolysis products of AX) derived from corn, wheat, and sugarcane have also received Letters of No Questions from FDA (e.g., GRN 427 [FDA, 2012]; GRN 343 [FDA, 2010], GRN 458 [FDA, 2013b], GRN 816 [FDA, 2019]). Furthermore, the EFSA NDA Panel concluded in 2018 that XOS were safe under the proposed uses and use levels as novel food pursuant to Regulation (EU) 2015/2283.

B. Literature Search Strategy

To support the current GRAS assessment for the proposed uses of corn bran arabinoxylan (AX; SFC), a literature search was performed in May 2022 by SafeBridge using the National Library of Medicine (NLM) PubMed database, as well as subscription-based literature databases (i.e., ToxPlanet, Timberlake Ventures, Inc.) to identify relevant safety data and information for AX, AXOS, and XOS (search terms: arabinoxylan; arabinoxylo-oligosaccharides; arabinoxylan oligosaccharides; xylo-oligosaccharides). The search was performed for all relevant publications to date with application of the PubMed Toxicology Subset filter¹ for the non-clinical data search. Publications considered relevant to the current GRAS assessment are summarized or cited in the subsections below, including metabolism, toxicology, and clinical safety evidence for AX, AXOS, XOS and SFC (corn bran AX). As human clinical safety data for AX, AXOS, and XOS are abundant, studies were excluded from the current literature review when the potential beneficial physiologic effects of these materials were assessed by using *in vitro* test systems or animal models. Further, due to the compositional similarity between AX, AXOS, XOS, and xylans commonly consumed as a component of cereal grains, the purported bioactive properties (i.e. beneficial health effects) of AX, AXOS, and XOS as described in the literature are expected to be similar to the effects of xylans and other dietary fibers when consumed as part of the normal human diet.

¹ <u>https://www.nlm.nih.gov/bsd/pubmed_subsets/tox_strategy.html</u>

C. Metabolism and Toxicology Profile of Arabinoxylan and SFC

Metabolism

The structure of corn bran arabinoxylan (corn bran AX; SFC) which consists of a xylan backbone and arabinose, galactose, glucuronic acid, and ferulic acid residues as side chains, is not recognized by human derived digestive enzymes, such as amylase, and reaches the proximal colon largely undigested. SFC and other arabinoxylans are, however, recognized by carbohydrate active enzymes encoded by the human gut microbiome. Therefore, SFC is expected to be degraded in the colon by specialized microbes (e.g., Bifidobacterium longum) that encode AXdegrading glycosidase within their genomes, releasing AXOS and XOS as the major hydrolysis products (Nguyen et al., 2020). AXOS and XOS are expected to undergo further fermentation in the colon by secondary fermenters until being completely degraded, contributing to the net formation of hydrogen, carbon dioxide, and beneficial short-chain fatty acids (SCFA), primarily acetate, propionate, and butyrate (Nguyen et al., 2020; Broekaert et al., 2011; Grootaert et al., 2007). While gases are excreted by breath or as flatulence, SCFA are absorbed and primarily used for energy; however, other beneficial physiological effects of SCFA have been described (Deehan et al., 2017). Fermentation of both AX and its derivative AXOS is further associated with the release and absorption of ferulic acid (François et al., 2010; Napolitano et al., 2009). Both SCFA and ferulic acid are considered to be benign well-metabolized digestion products that are also produced upon digestion of natural plant-derived fibers present in a regular healthy diet rich in cereals, fruits, and vegetables (François et al., 2010; Wong et al., 2006; Ou and Kwok, 2004; Roediger, 1982). Therefore, metabolism of corn bran AX (SFC) does not raise safety concerns.

Toxicology

Traditional toxicology studies have not been performed on most cereal derived AXs, including corn bran AX (SFC), as they have been commonly consumed constituents of dietary fiber for centuries. However, studies have been performed on some structurally comparable AXs and their major hydrolysis products such as AXOS and XOS. While the exact toxicology studies are summarized below, studies have been performed Ispaghula husk AXs [these xylans typically have very high molecular weights (MWs) around 200,000 to 1,100,000 Daltons (Van Craevveld et al., 2009; Izydorczyk and Biliaderis, 1995)] and sugarcane bagasse AXs [largely xylans around 37,000 Daltons (Qin et al., 2022; Qin et al., 2017)]. Corn bran AX (SFC) has relatively larger MW xylans around 373,000 to 495,000 Daltons that would be comparable to the lower MW Ispaghula husk xylans and around 10X the size of sugarcane bagasse xylans (see Table 8, below). Toxicology studies have also been performed on wheat bran AXOS [oligosaccharides around 282 to 1,998 Daltons (GRN 343, François et al., 2010)] and XOS from corn cobs [oligosaccharides around 450 to 900 Daltons (GRN 458)], which would be the major hydrolysis products of AX-degradation by the gut microbiota and, as such, the toxicology data is relevant to consider in the safety evaluation of an AX and support the GRAS conclusion for intended uses of corn bran AX (SFC).

Acute toxicity studies using AX isolated from Ispaghula (*Plantago ovata*) husk were performed in male and female Swiss albino mice and White albino rabbits, wherein single oral gavage doses of AX were administered at up to 10 g/kg (mice) or 5 g/kg (rabbits) and observed for a period of 14 days (Erum *et al.*, 2015). The Ispaghula husk AX studied was also extracted using a comparable alkali-extraction method as described for SFC (also consistent with method for corn hull fiber [GRN 427]), resulting in a molecular weight of around 350,000 Daltons that primarily consisted of xylose and arabinose moieties at an arabinose-to-xylose (A/X) ratio around 0.30, as well as galactose and rhamnose residues (Erum *et al.*, 2015; Saghir *et al.*, 2008). Following AX dosing, no significant changes in water and food consumption and no mortality were reported. Body weights (bws) of the mice and rabbits decreased initially with a gradual increase until day 14, when they were similar to control values. Relative organ weights were found to be normal, and hematological, biochemical, and histopathological examination did not show any significant changes when compared to controls.

Genotoxicity, teratogenicity, and 90-day subchronic toxicity studies were performed on an AX from sugarcane bagasse (inaccurately referred to as xylan) that was primarily comprised of xylose with residual arabinose present as side chains at an A/X ratio of 0.05 (Qin et al., 2022; Qin et al., 2017). In the subchronic toxicity study conducted according to the Ministry of Health of China guidelines, specific pathogen free Sprague-Dawley rats (10 animals/sex/group) were fed diets containing 0% (control), 2.5%, 5%, and 10% AX for 90 days (equivalent to 0.0, 2.2, 4.6, and 9.0 g/kg males and 0.0, 2.7, 5.4, and 10.6 g/kg females). No treatment related adverse effects were observed and the no-observed-adverse-effect level (NOAEL) of AX was considered to be the highest tested concentration of 10% (Qin et al., 2017). The genotoxicity tests (i.e., Ames test, in vivo mouse bone marrow micronucleus test, and mice sperm abnormality test) were conducted following standardized protocols set by the Ministry of Health of China, which were developed with reference to OECD Testing Guidelines and US FDA Redbook 2000 Toxicological Principles for the Safety Assessment of Food Ingredients. AX showed no mutagenic activity in the Ames test, and no significant effect on sperm morphology or micronucleus rate of polychromatic erythrocytes in mice at doses up to 5 g/kg bw (Qin et al., 2022). In the teratogenicity study performed in accordance with the Ministry of Health of China testing protocol, a total of 60 pregnant Sprague-Dawley rats were exposed to 2.5%, 5%, or 10% AX in the diet (equivalent to 2.4, 4.7, and 9.8 g/kg bw), from gestation days 7 to 16. There were no treatment related effects observed on any endpoint evaluated and the NOAEL of AX for the teratogenicity test was determined to be 9.8 g/kg bw, the highest dose tested (Qin et al., 2022).

Mutagenicity, clastogenicity, and 90-day rat-feeding studies have been performed on wheat bran AXOS (François *et al.*, 2010) in order to support the safety assessment and GRAS evaluation of wheat bran extract (WBE) (GRN 343). The WBE is the hydrolysis product of wheat bran and contained around 80% AXOS with a DP of around 3 to 8 [corresponding to around 282 to 1,998 Daltons (GRN 343)]), consisting of primarily xylose and arabinose moieties at an A/X ratio around 0.19, but with glucuronic acid and ferulic acid residues as side chains. Prior to hydrolyzation, wheat bran AX are also reported to be between 640,000 to 1,000,000 Daltons (Liu *et al.*, 2020; Edwards *et al.*, 2003), a MW around 2X the size of corn bran AX (SFC). There was no evidence of mutagenic or clastogenic activity with WBE in the bacterial reverse mutagenicity assay (Ames test) (OECD Testing Guideline 471) or the *in vitro* chromosome aberration assay on Chinese hamster lung fibroblast cells (OECD Testing Guideline 473) (François *et al.*, 2010). In

the sub-chronic toxicity study performed in accordance with OECD Testing Guideline 408, Wistar Crl:(WI BR) rats (10 animals/sex/group) were fed a semisynthetic diet (AIN 93G) containing 0.3%, 1.5%, or 7.5% WBE for 13 weeks, corresponding to an average intake of 0.2, 0.9, and 4.4 g/kg bw per day. There were no treatment related adverse effects observed in the WBE treatment groups and the NOAEL for WBE was determined to be 7.5%, the highest dose tested, equivalent to a daily average intake of 4.4 g/kg bw per day (François *et al.*, 2010).

Additional toxicology studies on XOS were performed on XOS from powdered corn cobs (GRN 458 [FDA, 2013b]), including a 13-week study in Sprague-Dawley rats and a 26-week study in Beagle dogs (Gao *et al.*, 2017, 2012) performed in accordance with the Ministry of Health of China Technical Standards for Testing & Assessment of Health Food. The NOAEL for XOS determined in the 13-week study in Sprague-Dawley rats was 11.5 g/kg and 15 g/kg bw per day for males and females, respectively, the highest doses tested (Gao *et al.*, 2012). In the 26-week study in Beagle dogs that were given daily XOS doses (6 days/week) of 1.25, 2.5, and 5 g/kg bw per day (Gao *et al.*, 2017), occasional vomiting (high-dose only) and loose stools in the mid and/or high dose groups were observed and were attributed to the consumption of very high doses of a non-digestible carbohydrate substance. These effects weakened gradually and disappeared during the 4-week recovery period. The 2.5 g/kg bw dose level was considered to be the NOAEL in the dog study.

As described above, corn bran AX (SFC) has a bimodal molecular weight distribution with 95% of the ingredient comprised of long-chain fibers with average MWs around 373,000 to 495,000 Daltons, and 5% of the ingredient comprised of shorter-chain fibers around 3,000 to 4,300 Daltons. The arabinose-to-xylose (A/X) ratio in representative samples was around 0.84 to 0.88 (Table 4 [analysis via the alditol acetate method]) with sections of the arabinoxylan chain further substituted with galactose, glucuronic acid, and ferulic acid, which has been described for other alkali-extracted corn bran AXs (Cai et al., 2021; Zhang et al., 2016) and is indicative of a heavily branched structure with complex side chains (Xu et al., 2022; Nguyen et al., 2020; Kale et al., 2018; Hamaker and Tuncil, 2014; Rose et al., 2010; Izydorczyk and Biliaderis, 2007; Saulnier et al., 1995a). The ratio of arabinose to xylose is noted to vary (e.g., typically from 0.3 to 1.1) among arabinoxylans derived from different grains, which correlates with the degree of branching and possibly to the rate of fermentation by gut microbiota (Rose et al., 2010; Izydorczyk and Biliaderis, 2007). Additionally, variations in analytical methodology may yield slightly different values for arabinose-to-xylose ratio (i.e. 0.56 reported in Nguyen et al., 2020 for SFC analyzed by the TMS-methylglycoside method [described further in Table 4]). However, as discussed below, this variation in branching is not expected to impact the safety or toxicological profile of these fiber ingredients when orally consumed.

Corn bran AX contains the exact carbohydrate (i.e., xylose, arabinose, galactose, and glucuronic acid) and polyphenolic moieties (i.e., ferulic acid) present in the above-described AX, AXOS, and XOS that were subjected to toxicological evaluation. What differentiates these products is only the complexity of the branching structure off the xylan backbone, the degree of polymerization/length of the xylan backbone, and the overall MW; although, the MWs and monosaccharides of corn bran and Ispaghula husk AXs were comparable (see Table 8, below). These structural differences are not expected to impact the safety or toxicological profile of the fibers. As such, no treatment related adverse effects were observed for the complex AXs to

simple AXOS and XOSs evaluated, with the NOAEL determined as the highest evaluated dose in each study (Qin et al., 2022; Qin et al., 2017; Erum et al., 2015; Gao et al., 2012; François et al., 2010), expect for the sub-chronic dog study (Gao et al., 2017), in which occasional vomiting at the high-dose of XOS was attributed to the consumption of very high doses of a non-digestible carbohydrate substance and resolved during the 4-week recovery period. Wheat bran derived AXOS (GRN 343), corn cob derived XOS (GRN 458), and sugarcane derived XOS (GRN 816) are also all commercially available and have affirmed GRAS status (FDA Response Letters dated 2010, 2013b, and 2019, respectively). Finally, corn hull fiber, the insoluble fiber fraction of corn bran, is GRAS affirmed and contains around 22% to 37% hemicellulose as AXs, which are structurally similar to SFC but associate with cellulose and remain insoluble (Yadav et al., 2017; GRN 427 [FDA, 2012]; Doner and Johnston, 2001; Saulnier et al., 1995c). Although an impact on safety is not expected, the structural and compositional differences between these fibers do affect their rate of fermentation by the gut microbiota and overall tolerability. In contrast to short-chain AXOS and XOS that raise fermentation rates and reduce tolerability, restricting the amount feasibly consumed per day, AX from Ispaghula husk and corn bran are poorly and slowly fermented, respectively, and well tolerated at elevated doses (Nguyen et al., 2020; Deehan et al., 2022 [manuscript in preparation]; Rumpagaporn et al., 2015; Rose et al., 2010; McRorie 2013). Considering that the A/X ratio for SFC is within the typical 0.3 to 1.1 range of variability for AX derived from cereal grains (Izydorczyk and Biliaderis, 2007; Rose et al., 2010), the branching structure may impact the rate/pattern of microbial fermentation following oral consumption; however, the A/X ratio of SFC would not impact safety. Thus, on the basis of its compositional similarity and lack of differences that would impact safety or toxicological endpoints, the published toxicological data available for AX, AXOS, and XOS, including NOAELs of at least 2,500 mg/kg bw/day, are considered relevant to corn bran AX (SFC). Further, these non-clinical toxicology study NOAELs for AX, AXOS, and XOS are corroborated by clinical safety evidence with corn bran AX (SFC) as discussed below.

Compound	Estimated Molecular Weight (MW)	Estimated Degree of Polymerization (DP)		Primary Moieties	Other Side Chains/ Residues	NOAEL	Reference(s)
Corn bran AX (SFC)	95% long- chain fibers: 373,000 to 495,000 Daltons	2,000-3,000	0.84-0.88 (alditol acetate method) ^a 0.56 (TMS- methylglycoside method) ^a	xylose and arabinose	galactose, glucuronic acid, and ferulic acid	25 g/day (females) and 35 g/day (males) for six weeks (highest tested doses) was safe and well tolerated in humans	Nguyen <i>et al.</i> , 2020 Note: SFC sample used in this study was referred to as "BFG"
Ispaghula husk AX	350,000 Daltons	2,000-2,500	0.30	xylose and arabinose	galactose and rhamnose	10 g/kg bw (mouse, single dose)	Erum <i>et al.</i> , 2015; Saghir <i>et al.</i> , 2008
Sugarcane bagasse AX (GRN 816)	37,000 Daltons	200-300	0.05	xylose	arabinose	9.8 g/kg bw/day (rat, 90-day) ^b	Qin <i>et al.</i> , 2017, 2022
Wheat bran AXOS (GRN 343)	282-1,998 Daltons	3-8	0.19	xylose and arabinose	glucuronic acid and ferulic acid residues	4.4 g/kg bw/day (rat, 90-day)	François et al., 2010
Corn cob XOS (GRN 458)	450-900 Daltons	3-6	0.00	xylose	N/A	13.2 g/kg bw/day (rat, 90-day) ^b 2.5 g/kg bw/day (dog, 26-week)	Gao <i>et al.</i> , 2012, 2017

 Table 8. Comparison of Structurally-Related Test Articles to AgriFiber's Corn Bran AX (SFC)

^a Methods described in Table 4 above

^b Average of reported doses for males and females

D. Clinical Safety Evidence for Arabinoxylan and SFC

Arabinoxylan (AX) and its major hydrolysis products, AXOS and XOS, have been studied extensively in humans for potential beneficial effects on gastrointestinal health parameters, as well as metabolic markers of obesity and diabetes.

Clinical Studies on Arabinoxylan

Six studies evaluating the effect of AX on blood glucose and insulin levels in human volunteers have been published (Hartvigesen et al., 2014a,b; Garcia et al., 2007, 2006; Lu et al., 2004; Möhlig et al., 2005). Garcia et al., (2007, 2006) reported on a randomized, single-blind, controlled, cross-over intervention study in which 11 overweight women and men with impaired glucose tolerance consumed white bread rolls that alternately contained no AX (control) or that were supplemented with AX totaling 15 g AX/day for six weeks, with a six-week washout period in between. Hartvigesen et al., (2014a) reported on an acute, randomized, cross-over intervention study in which 15 Danish women and men with metabolic syndrome consumed a meal that alternately provided 50 g of digestible carbohydrate (control) or 6 or 7 g/serving of added AX after an overnight fast. Blood samples were drawn at various time points up to 270 minutes. Hartvigesen et al., (2014b) reported on an acute, randomized, cross-over intervention study in which 15 Danish women and men with metabolic syndrome consumed a meal that alternately provided 50 g of digestible carbohydrate (control) or up to 4.7 g/serving of added AX after an overnight fast. Blood samples were drawn at various time points up to 360 minutes. Lu et al., (2000) reported on a randomized, cross-over design study in which 14 healthy Australian women and men consumed three isoenergetic breakfasts of bread, margarine, and jam providing 75 g of available carbohydrates containing either 0 g (control), 6 g, or 12 g of AX after an overnight fast. Lu et al., (2004) reported on a randomized, cross-over intervention study in which 15 Australian women and men with type II diabetes consumed their normal diet supplemented with bread and muffins (50% whole wheat and 50% white flour) (control) or with bread and muffins (50% whole wheat, 36% white flour) that contained 15 g of AX for five weeks each. Both the control and treatment bread and muffins contained the same amount of available carbohydrate. Möhlig et al., (2005) reported on a cross-over design study in which 15 German women and men consumed a breakfast with 0 g (control) and 6 g of AX, after which blood glucose levels were measured up to 120 minutes. In consideration of these studies, FDA concluded that the strength of the evidence supports that AX have a beneficial physiological effect on blood glucose and insulin levels (FDA, 2018). There were no adverse events reported in any of these studies nor treatment related effects that would raise safety concerns.

Additional clinical studies on AX include studies evaluating the effects of Biobran/MGN-3, an arabinoxylan concentrate from rice bran, on health-related quality of life in older healthy adults, NK cell activity in geriatric subjects, viremia level in patients with chronic HCV infection, and cancer treatment therapy (Elsaid *et al.*, 2020, 2018; Ooi *et al.*, 2018; Salama *et al.*, 2016). There were no side effects observed at the Biobran/MGN-3 doses evaluated by Elsaid *et al.*, (2020, 2018) (i.e., 500 mg/day for 30 days; 250 mg/day for 3 months) or Salama *et al.*, (2016) (i.e., 1 g/day for 3 months), and no reported adverse events from Biobran/MGN-3 in the 11 clinical studies reviewed by Ooi *et al.*, (2018).

Clinical Study on Corn Bran Arabinoxylan (SFC)

In a randomized, parallel two-arm, controlled trial in 31 male and female adults with overweight and class-I obesity, corn bran AX (SFC, previously identified as "BFG"), which contained $81.0 \pm$ 1.3% soluble AX, was determined to be safe and well tolerated at repeated daily doses of 25 g (females) or 35 g (males) for 6 weeks (Deehan et al., 2022; Nguyen et al., 2020; Deehan et al., 2022 [manuscript in preparation]; Deehan et al., 2021 [unpublished report]). Participants consumed microcrystalline cellulose (control) or SFC as a powdered supplement (25 g for females and 35 g for males) incorporated into subject-preferred foods and drinks, with participants also receiving guidance on incorporating the fibers into foods so as to ease high-dose supplementation. Blood and/or fecal samples were collected during the baseline visit, after one week of treatment, and during the sixth week of treatment. Gastrointestinal symptoms were assessed at baseline and weekly during the intervention by completing a symptoms diary. Adverse events were assessed at the beginning of each clinic visit. Safety related clinical measurements included body weight, blood pressure, complete blood count (red blood cells, hemoglobin, hematocrit, mean corpuscular volume, mean corpuscular hemoglobin concentration, red cell distribution width, white blood cells, and platelets), blood glucose and insulin, and lipid profile (triglycerides, total cholesterol, low-density lipoprotein (LDL) cholesterol, and highdensity lipoprotein (HDL) cholesterol) (Deehan et al., 2021 [unpublished report]).

No significant changes in the SFC treatment group were observed in the measured complete blood count parameters as compared to the microcrystalline cellulose control group (nonfermentable control). As with other fermentable dietary fibers (Rumpagaporn et al., 2015; Koecher et al., 2014; Kaur et al., 2011; Grabitske and Slavin, 2009; Livesey, 2001; IOM, 2002/2005), consumption of SFC at these high daily doses intensified gastrointestinal symptoms. However, effects were mild and transient, with ratings returning to baseline levels during weeks 4 to 6 (Deehan et al., 2022 [manuscript in preparation]; Deehan et al., 2021 [unpublished report]). No serious adverse events were observed in the SFC study group. In terms of nonserious adverse events, one individual consuming SFC and one individual consuming microcrystalline cellulose reported constipation within the first two weeks of the study, resulting in their withdrawal from the study (Nguyen et al., 2020; Deehan et al., 2021 [unpublished report]). The IOM recognizes that "while occasional adverse gastrointestinal symptoms are observed when consuming one of the isolated or synthetic fibers, serious chronic adverse effects have not been observed. Furthermore, due to bulking effects of fibers, excess consumption is likely to be self-limiting" (IOM, 2002/2005). Therefore, an UL (Tolerable Upper Intake Level) was not set by the IOM for these individual fibers.

Clinical Studies on Arabinoxylan Oligosaccharides

Published clinical safety evidence on AXOS and XOS include studies evaluating their effects on gastrointestinal health parameters and metabolic markers in overweight individuals (Christensen *et al.*, 2020; Kjølbæk *et al.*, 2020; François *et al.*, 2014; François *et al.*, 2012;). AXOS-rich WBE (containing 79% AXOS) at doses of 5 g/day for 3 weeks was well tolerated in children and not associated with adverse effects (François *et al.*, 2014). No serious adverse effects were observed following AXOS-rich WBE or AXOS doses of 10 g/day for 3 weeks (François *et al.*, 2015).

2012) and 10.4 g/day for 4 weeks (Christensen *et al.*, 2020; Kjølbæk *et al.*, 2020), although mild symptoms of increased flatulence were reported more frequently during AXOS intake (Christensen *et al.*, 2020; Kjølbæk *et al.*, 2020; François *et al.*, 2012).

In a study by Walton *et al.*, (2012), no adverse effects on gastrointestinal symptoms were reported in healthy volunteers following consumption of AXOS-enriched bread (total intake of 2.2 g AXOS/day) for 21 days.

Human intervention studies with XOS (Yang *et al.*, 2015; Finegold *et al.*, 2014; Xiao *et al.*, 2012) indicate the occurrence of acute and transient gastrointestinal effects at the beginning of the consumption of XOS at doses of 10-12 g/day. These effects have also been associated with the consumption of other non-digestible carbohydrates; therefore, it is concluded that the available human data do not raise safety concerns in relation to proposed uses of XOS. As discussed in GRN 458, the incidence of diarrhea in the high-dose XOS treatment group (8-12 g per day) evaluated by Xiao *et al.*, (2012) was similar to the maltodextrin control group (GRN 458; FDA, 2013b). The maximum level of XOS that does not cause gastrointestinal symptoms in men was reported to be 0.12 g/kg bw/day (equivalent to 7.2 g/person/day for a 60 kg adult) (Oku and Nakamura, 2002).

In summary, a large body of clinical safety evidence exists for AX and AXOS (the major hydrolysis products of AX), with the only side effects noted related to transient gastrointestinal effects that are commonly seen with other non-digestible carbohydrates and expected to be self-limiting. SFC specifically was determined to be safe and well tolerated at doses of 25 g (females) or 35 g (males), the highest doses tested, for 6 weeks (Deehan *et al.*, 2022; Nguyen *et al.*, 2020; Deehan *et al.*, 2022 [*manuscript in preparation*]; Deehan *et al.*, 2021 [*unpublished report*]).

E. Allergenicity

Corn bran arabinoxylan (SFC) does not contain any of the eight allergens that are considered to be major food allergens under the United States Food Allergen Labelling and Consumer Protection Act of 2004 (FALCPA). Products containing SFC will be labeled appropriately to inform consumers to the presence of corn derived ingredients.

The isolation approach used in the production of SFC lowers the amount of protein in the final ingredient by up to ~50%, when compared to the protein content reported for corn bran and whole grain corn. Although a maize allergen has been identified as a lipid transfer protein (LTP) (Goodman *et al.*, 2013; Pastorello *et al.*, 2003), only around <4% of the total soluble protein content in corn is shown to be LTP (Kader, 1996). Therefore, the possible presence of LTP in SFC is not expected to be a safety concern and the potential for an allergic response to SFC is lower than that associated with normal consumption of corn.

F. Antinutrients

In review of the literature regarding antinutrients in food crops, the primary antinutrient of concern in corn is phytates (Petroski and Minich, 2020; Anderson *et al.*, 2019; Gilani *et al.*,

2012; Novak and Haslberger, 2000; OECD, 2002). The majority of phytates (~80%) found in corn are found in the germ (Singh, 2020; Gilani *et al.*, 2012); therefore, any phytate levels present in SFC (corn bran AX) which is derived from corn bran are not expected to be a safety concern for the intended use. Corn may also contain low levels of trypsin inhibitors and raffinose (OECD, 2002), none of which are considered to be a safety concern for the intended use of SFC, an enzymatically treated ingredient derived from corn bran that is subjected to an alkali-hydrothermal process and heat-treated drying method. Raffinose levels in field/sweet corn are <0.5% and can be removed from food and feed by soaking, cooking, enzyme, or solvent treatment and by irradiation (Anderson *et al.*, 2019; OECD, 2002). Trypsin inhibitors can be removed to 19.59–118.68 TIU/mg dry matter in soybeans (OECD, 2012). Trypsin inhibitors can be removed by thermal treatment (Avilés-Gaxiola *et al.*, 2018). Levels of these antinutrients in SFC and final food matrices formulated with SFC would be negligible and do not raise safety concerns for intended uses of SFC.

G. Safety Summary and GRAS Conclusion

Corn bran arabinoxylan (corn bran AX; SFC) shows structural similarities with those AXs commonly consumed in the diet and meets the FDA's expanded definition of dietary fiber (FDA, 2018).

Corn bran AX (SFC) is expected to be degraded in the colon by specialized microbes that encode AX-degrading glycosidase within their genomes, releasing arabinoxylo-oligosaccharides (AXOS) as the major hydrolysis product (Nguyen *et al.*, 2020). AXOS undergo further fermentation in the colon by secondary fermenters, which contributes to the net formation of hydrogen, carbon dioxide, and beneficial short-chain fatty acids (SCFA), primarily acetate, propionate, and butyrate (Nguyen *et al.*, 2020; Broekaert *et al.*, 2011; Grootaert *et al.*, 2007;). Fermentation of both AX and its derivative AXOS is further associated with the release and absorption of ferulic acid (François *et al.*, 2010; Napolitano *et al.*, 2009). Both SCFA and ferulic acid are considered to be benign well-metabolized digestion products that are also produced upon digestion of natural plant-derived fibers present in a regular healthy diet rich in cereals, fruits, and vegetables (François *et al.*, 2010; Wong *et al.*, 2006; Ou and Kwok, 2004; Roediger, 1982). Therefore, the metabolism of SFC does not raise safety concerns.

Based on the published data for AX and AXOS (the major hydrolysis products of AX), there is no concern for genotoxicity or mutagenicity of SFC and no systemic toxicity is expected to follow ingestion of SFC.

A large body of clinical safety evidence exists for AX and AXOS (the major hydrolysis products of AX), with the only side effects noted related to transient gastrointestinal effects that are commonly seen with other non-digestible carbohydrates and expected to be self-limiting. SFC (previously identified as "BFG") specifically was determined to be safe and well tolerated at doses of 25 g (females) or 35 g (males), the highest tested doses, for 6 weeks (Deehan *et al.*, 2022; Nguyen *et al.* 2020; Deehan *et al.*, 2022 [*manuscript in preparation*]; Deehan *et al.*, 2021 [*unpublished report*]).

As discussed in Section 3, the worst-case, 90th percentile consumer consumption of SFC is conservatively estimated as 35.3 g/day (providing a dietary fiber intake of up to approximately 32 g/day based on the maximum 90% fiber content in SFC) for the total population. These conservative intake estimates for SFC are supported by available published safety data for AX, corn bran AX (SFC), AXOS and XOS. Further, GRNs for similar AXOS and/or XOS ingredients has not resulted in any questions concerning their safety, and the maximum estimated daily intake of fiber from proposed uses of SFC (32 g fiber/day) is consistent with the current IOM (2002/2005) and FDA (2020) recommended intake values.

In summary, the totality of scientific evidence from publicly available information relevant to the safety of corn bran AX (SFC), including identity, specifications, manufacturing process, probable consumer exposure, ADME and toxicology profile, and clinical safety evidence, provides a basis upon which to conclude that there is a reasonable certainty that SFC, produced in accordance with current Good Manufacturing Practice, is not harmful under the proposed intended conditions of use. The safety data supporting this conclusion are known and accepted by a consensus of qualified experts in the general scientific community (refer to Exhibit II, GRAS Expert Panel Report). This not only assures that the intended uses of SFC described herein are safe, but also corroborates the conclusion that SFC is generally recognized as safe (GRAS) under the proposed conditions of use.

SafeBridge is not aware of any information that would be inconsistent with the conclusion that the proposed uses of corn bran AX (SFC), meeting appropriate specifications and used according to current Good Manufacturing Practice, are GRAS.

7. **REFERENCES**

<u>Note</u>: All references listed herein may be considered *generally available* with the exception of the supplemental Unpublished Report (Deehan *et al.* 2021) prepared for AgriFiber Solutions, LLC.

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EXHIBIT I.

Technical Documentation for Corn Bran Arabinoxylan (SFC; previously identified as "BFG")

Exhibit I-A: SFC Specifications

Exhibit 1-B: Certificates of Analysis (COA)

Including:

- AgriFiber: 3 COAs on 3 lots of GRAS material (dated June 25, 2020)
- Deibel Laboratories: 1 COA on 3 lots of GRAS material (dated June 25, 2020)
- Eurofins: 3 COAs on 3 lots of GRAS material (dated November 09, 2020)
- Eurofins: 1 COA on composite sample from 3 lots of GRAS material (dated August 12, 2020)



Soluble Fiber Corn (SFC)

Soluble Fiber Corn Ingredient (previously identified as BFG)

Product Number: 8582

DESCRIPTION

Appearance	Brown to Tan powder
Odor	Grainy to Neutral
Flavor	Grainy to Slightly sweet
Shelf Life PHYSICAL AND CHEMICAL PROPERTIES Tatal Distance Fiber 94	2 years at dry room temperature conditions
Total Dietary Fiber, %	74 - 90
Moisture, %	< 9.00
Ash, %	< 6.00
Color L Value	≥ 30.0

MICROBIOLOGY

Aerobic Plate Count (APC) / g	< 6000 cfu/g	FDA BAM
Yeast / g	< 200 cfu/g	FDA BAM: 7ed. 1992
Mold / g	< 200 cfu/g	FDA BAM: 7ed. 1992
Coliform / g	< 10 cfu/g	Petrifilm: AOAC 991.14
Escherichia coli / g	< 10 cfu/g	Petrifilm: AOAC 991.14
Salmonella	Negative/25g	FDA BAM; 8 th ed., Ch 5

COUNTRY OF MANUFACTURE: USA, manufactured from refined, dry milled corn bran.

CHEMICAL IDENTITY: Corn Bran Arabinoxylan

INGREDIENT STATEMENT: Corn fiber, Corn bran fiber, Soluble corn fiber, Soluble corn bran fiber, or Corn bran extract

PROCESSING AID: <0.01% DL-α-Tocopherol acetate (Vitamin E)

PACKAGING SIZE: 10 kg (22 lbs.); 23 x 12 ¹/₂ x 14 ³/₄" Food Grade Polyline Box (L x W x H)

CERTIFICATION: Safe Quality Food (SQF), Kosher, and Halal.

The information contained herein is based upon data considered to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe upon any intellectual property. We cannot anticipate all conditions under which this information and/or products of other manufacturers in combination with our products may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product for their own use. Buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products.

Document: SFC



AgriFiber Solutions, LLC 1011 Campus Drive Mundelein, IL 60060 ph: (847) 549-6002

CERTIFICATE OF ANALYSIS

Country of Manufacture: USA

Lot No: SFC.948179.01 (previously identified as BFG.948179.01)

Corn Fiber Powder: Soluble Corn Bran Fiber

Ingredient Statement: Corn fiber, < 0.01% DL-α-Tocopheryl acetate (Vitamin E).

(Organoleptic	Data:	Light brow	n powder,	neutral odor, slightly sweet.	\frown
	Physical Data	:				
		Color Value Viscosity		49.60 cP	a = 6.14 b = 18.77 Temp. at 25.1°C, 10% Solids Shear-thinning thixotropic gel	
		Moisture	4.41	%		
	Microbiologic	al Data:				
	Test	Method		Units		
	APC	FDA BAM	4800	cfu/g		
	Yeast	FDA BAM	<10	cfu/g		
	Mold	FDA BAM	<10	cfu/g		
	E. coli	Petrifilm	<10	cfu/g		
	Coliform	Petrifilm	<10	cfu/g		
\backslash	Salmonella	FDA BAM	Negative	/ 25g		
			-	C C		
	Shelf Life:	Two years if sto	red under o	cool dry co	nditions in a sealed container	
	Date of	Manufacturing:	May	18, 2020		
	E	Expiration Date:	May	17, 2022		
	Date o	of Certification:	June	25, 2020		

By acceptance of this product, you agree to not reverse engineer, infringe on or create IP using our ingredient, without the expressed approval, provided in writing, from an executive at AgriFiber Solutions LLC. These results are believed, to the best of our knowledge, to be correct and accurate. Finished product should be tested as additional processing and interaction with other ingredients may impact the test results.



AgriFiber Solutions, LLC 1011 Campus Drive Mundelein, IL 60060 ph: (847) 549-6002

CERTIFICATE OF ANALYSIS

Country of Manufacture: USA

Lot No: SFC.948779.01 (previously identified as BFG.948779.01)

Corn Fiber Powder: Soluble Corn Bran Fiber

Ingredient Statement: Corn fiber, < 0.01% DL-α-Tocopheryl acetate (Vitamin E).

Organolepti	c Data:	Light brow	n powder	, neutral odor, slightly sweet.	\frown
Physical Da	ta:				
	Color Value Viscosity		52.43 cP	a = 6.42 b = 20.20 Temp. at 25.1°C, 10% Solids Shear-thinning thixotropic gel	
	Moisture	4.81	%		
Microbiolog	ical Data:				
Test	Method		Units		
APC	FDA BAM	1200	cfu/g		
Yeast	FDA BAM	<10	cfu/g		
Mold	FDA BAM	<10	cfu/g		
E. coli	Petrifilm	<10	cfu/g		
Coliform	Petrifilm	<10	cfu/g		
Salmonella	FDA BAM	Negative	/ 25g		
		-			
Shelf Life	e: Two years if sto	red under o	cool dry c	onditions in a sealed container	
Date of	of Manufacturing:	May	12, 2020		
	Expiration Date:	Мау	11, 2022		
Date	of Certification:	June	25, 2020)

By acceptance of this product, you agree to not reverse engineer, infringe on or create IP using our ingredient, without the expressed approval, provided in writing, from an executive at AgriFiber Solutions LLC. These results are believed, to the best of our knowledge, to be correct and accurate. Finished product should be tested as additional processing and interaction with other ingredients may impact the test results.



AgriFiber Solutions, LLC 1011 Campus Drive Mundelein, IL 60060 ph: (847) 549-6002

CERTIFICATE OF ANALYSIS

Country of Manufacture: USA

Lot No: SFC.948879.01 (previously identified as BFG.948879.01)

Corn Fiber Powder: Soluble Corn Bran Fiber

Ingredient Statement: Corn fiber, < 0.01% DL-α-Tocopheryl acetate (Vitamin E).

Organoleptic	Data:	Light brow	n powder,	neutral odor, slightly sweet.	
Physical Data	a:				
-	Color Value	L =	48.18	a = 6.13 b = 19.22	
	Viscosity	533	сP	Temp. at 25.1°C, 10% Solids Shear-thinning thixotropic gel	
	Moisture	8.60	%		
Microbiologic	cal Data:				
Test	Method		Units		
APC	FDA BAM	5100	cfu/g		
Yeast	FDA BAM	<10	cfu/g		
Mold	FDA BAM	<10	cfu/g		
E. coli	Petrifilm	<10	cfu/g		
Coliform	Petrifilm	<10	cfu/g		
Salmonella	FDA BAM	Negative	/ 25g		
		-	-		
Shelf Life:	Two years if sto	red under o	cool dry co	nditions in a sealed container	
Date of	Manufacturing:	May	11, 2020		
I	Expiration Date:	May	11, 2022		
Date	of Certification:	June	25, 2020)

By acceptance of this product, you agree to not reverse engineer, infringe on or create IP using our ingredient, without the expressed approval, provided in writing, from an executive at AgriFiber Solutions LLC. These results are believed, to the best of our knowledge, to be correct and accurate. Finished product should be tested as additional processing and interaction with other ingredients may impact the test results.



 7120 N. Ridgeway Ave Lincolnwood,IL 60712 ph: 847-329-9900 fax: 847-329-9903 www.DeibelLabs.com

 Name:
 AgriFiber Solutions LLC

 Order ID: LI-200528-113

 Customer:
 Adam Blackshaw

 Address:
 1011 Campus Drive

 Mundelein, IL
 Reported: 5/28/2020 13:18:22

 60060
 P.O. #: CP

 USA
 Page: 1 of 4

 847-549-6002 x1080
 Report of Results

Deibel Lab #: LI-200528-113-002 Analysis Date:2020/05/28 Receiving Temperature: 20C Sample Condition: Okay

Description: GRAS#2 CBFG2-948879-01

Test:	Result:	Units:	Method:	Reference:	Comment:
APC	5100	cfu/g	FDA BAM	AOAC 966.23	
Coliform Petrifilm	<10	cfu/g	Petrifilm	AOAC 991.14	
Yeast	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	
Mold	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	

Sample group reactivated for additional test. LI-200528-113-000005 Revised DV 6/25/20 -.000006 Revised DV6/25

Login By: GE

Entered By: WELDRIDGE

Approved By: DVI

The above test results only represents that portion of the product lot that has been sampled by the client and sent to Deibel Laboratories. This report conforms to 21 CFR Part 11 compliancy for electronic signatures. The final approval of this Formal Report is authorized by the individual labeled as 'Approved By'. Test results relate only to the analytical unit tested. This report cannot be reproduced except in full, and by the written consent of Deibel Labs. All information contained herein is Trade Secret and Confidential. See our updated terms and condition at www.deibellabs.com/termsandconditions



7120 N. Ridgeway Ave Lincolnwood,IL 60712 ph: 847-329-9900 fax: 847-329-9903 www.DeibelLabs.com					
Name: AgriFiber Solutions LLC	Order ID: LI-200528-113				
Customer: Adam Blackshaw	Report ID: LI-200528-113.000007				
Address: 1011 Campus Drive	Date Received: 5/28/2020 13:18:22				
Mundelein, IL	Reported: 6/25/2020 13:25:32				
60060	P.O. #: CP				
USA	Page: 2 of 4				
847-549-6002 x1080					
Report of Results					

Deibel Lab #: LI-200528-113-002 Analysis Date:2020/05/28 Receiving Temperature: 20C Sample Condition:Okay Description: GRAS#2 CBFG2-948879-01

Test:	Result:	Units:	Method:	Reference:	Comment:
Salmonella FDA/BAM	Negative	/25g	FDA-BAM	8th ed., Ch 5	
C.perfringens	<10	cfu/g	FDA BAM	8 ed. Ch 16	
Aflatoxin ELISA	<5.0	ppb	Neogen Veratox	AOAC RI-05091	
Protein (Factor 6.25)	5.22	%	Kjeldahl	AOAC 991.20	
Ash	4.67	%	Gravimetric	Mod 923.03/942.05	
Lead ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Arsenic ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Cadmium ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Mercury ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Tests sent to outsource labs	Total fiber		Outside Lab Information	Available Upon Request	
Total Dietary Fiber	84.10	%	Enzymatic HPLC	AOAC 2009.01	
- Fat - Acid Hydrolysis*	2.55	%	Gravimetric	AOAC 922.06	
Deibel Lab #: LI-200528-113-00	3 Analysis	s Date:2020/	05/28 Receiving Tem	perature: 20C Sai	nple Condition: Okay

Description: GRAS#3 CBFG2-948779-01

Test:	Result:	Units:	Method:	Reference:	Comment:
APC	1200	cfu/g	FDA BAM	AOAC 966.23	
Coliform Petrifilm	<10	cfu/g	Petrifilm	AOAC 991.14	
Yeast	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	
Mold	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	
Salmonella FDA/BAM	Negative	/25g	FDA-BAM	8th ed., Ch 5	
C.perfringens	<10	cfu/g	FDA BAM	8 ed. Ch 16	
Aflatoxin ELISA	<5.0	ppb	Neogen Veratox	AOAC RI-05091	
Protein (Factor 6.25)	5.69	%	Kjeldahl	AOAC 991.20	

Sample group reactivated for additional test. LI-200528-113-000005 Revised DV 6/25/20 -.000006 Revised DV6/25

Login By: GE

Entered By: WELDRIDGE

Approved By: DVI

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"Systems of Excellence"



7120 N. Ridgeway Ave Lincolnwood,IL 60712 ph: 847-329-9900 fax: 847-329-9903 www.DeibelLabs.com								
Name:	AgriFiber Solutions I	LLC	Order ID: LI-200528-2	113				
Customer:	Adam Blackshaw		Report ID: LI-200528-113.000007					
Address:	Address: 1011 Campus Drive Date Received: 5/28/2020 13:18:22							
	Mundelein, IL		Reported: 6/25/2020 1	3:25:32				
	60060		P.O. #: CP					
	USA		Page: 3 of 4					
	847-549-6002 x1080)						
Report of Results								
Deibel Lab #:	LI-200528-113-003	Analysis Date:2020/05/28	Receiving Temperature: 20C	Sample Condition: Okay				
Description	: GRAS#3 CBFG2-94877	9-01						

Result:	Units:	Method:	Reference:	Comment:
4.55	%	Gravimetric	Mod 923.03/942.05	
<0.10	ppm	ICP-OES	AOAC 985.01 modified	
<0.10	ppm	ICP-OES	AOAC 985.01 modified	
<0.10	ppm	ICP-OES	AOAC 985.01 modified	
<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Total fiber		Outside Lab Information	Available Upon Request	
84.40	%	Enzymatic HPLC	AOAC 2009.01	
2.59	%	Gravimetric	AOAC 922.06	
	4.55 <0.10 <0.10 <0.10 <0.10 Total fiber 84.40	4.55 % <0.10 ppm <0.10 ppm <0.10 ppm <0.10 ppm	4.55 %Gravimetric<0.10 ppm	4.55 %GravimetricMod 923.03/942.05<0.10 ppm

Deibel Lab #: LI-200528-113-004 Analysis Date:2020/05/28 Receiving Temperature: 20C

Sample Condition: Okay

Description: GRAS#4 CBFG2-948179-01

Test:	Result:	Units:	Method:	Reference:	Comment:
APC	4800	cfu/g	FDA BAM	AOAC 966.23	
Coliform Petrifilm	<10	cfu/g	Petrifilm	AOAC 991.14	
Yeast	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	
Mold	<10	cfu/g	FDA BAM	FDA BAM: 7ed. 1992	
Salmonella FDA/BAM	Negative	/25g	FDA-BAM	8th ed., Ch 5	
C.perfringens	<10	cfu/g	FDA BAM	8 ed. Ch 16	
Aflatoxin ELISA	<5.0	ppb	Neogen Veratox	AOAC RI-05091	
Protein (Factor 6.25)	5.65	%	Kjeldahl	AOAC 991.20	
Ash	5.12	%	Gravimetric	Mod 923.03/942.05	
Lead ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Arsenic ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	
Cadmium ICP (ppm)	<0.10	ppm	ICP-OES	AOAC 985.01 modified	

Sample group reactivated for additional test. LI-200528-113-000005 Revised DV 6/25/20 -.000006 Revised DV6/25

Login By: GE

Entered By: WELDRIDGE

Approved By: DVI

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60712 ph: 847-329-9900 fax: 847-329-9903 www.DeibelLabs.com
Order ID: LI-200528-113
Report ID: LI-200528-113.000007
Date Received: 5/28/2020 13:18:22
Reported: 6/25/2020 13:25:32
P.O. #: CP
Page: 4 of 4
Report of Results

Deibel Lab #: LI-200528-113-004 Analysis Date:2020/05/28 Receiving Temperature: 20C Sample Condition:Okay Description: GRAS#4 CBFG2-948179-01

Test:	Result:	Units:	Method:	Reference:	Comment:
Mercury ICP (ppm)	<0.10) ppm	ICP-OES	AOAC 985.01 modified	
Tests sent to outsource labs	Total fibe	r	Outside Lab Information	Available Upon Request	
Total Dietary Fiber	83.40) %	Enzymatic HPLC	AOAC 2009.01	
Fat - Acid Hydrolysis*	2.60) %	Gravimetric	AOAC 922.06	

Sample group reactivated for additional test. LI-200528-113-000005 Revised DV 6/25/20 -.000006 Revised DV6/25

Login By: GE

Entered By: WELDRIDGE

Approved By: DVI

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Eurofins Scientific Inc. (Des Moines)

2200 Rittenhouse Street Suite 150 Des Moines, IA 50321 +1 515 265 1461 ENACClientServices@EurofinsUS.com

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AgriFiber Solutions LLC Adam Blackshaw

1011 Campus Drive

Mundelein, IL 60060

ANALYTICAL REPORT

AR-20-QD-200481-01

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-1026 BFG948179-01 Soluble Corn F		Sample Registration I Condition Upon Rece Sample Reference:	Date: 26Oct2020 ipt: acceptable, non-pe BFG	erishable
QD275 - Serving Size (C Supplied)	ustomer	Reference No Reference			Completed 28Oct2020
Parameter Unit weight		Result 100.0000 g	Per Serving 100.0000 g	Theoretical	
Units per serving		1	1	1	
Serving Size		100.00 g	100.00 g	100 g/Serving	
QD252 - Protein - Comb	ustion	Reference AOAC 990.03;	AOAC 992.15	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 29Oct2020
Parameter Protein		Result 5.75 %	Per Serving 5.75 g/Serving	Theoretical	
Nitrogen - Combustion		0.92 %	0.92 g/Serving	3	
Protein Factor		6.25	6.25		
QD250 - Ash		Reference AOAC 942.05		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 29Oct2020
Parameter Ash		Result 5.29 %	Per Serving 5.29 g/Serving	Theoretical	
QD226 - Calories, Calcu	lated	Reference CFR - Atwater	calculation	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Calories Calculated		Result 201 kcal/100	Per Serving g 201 kcal/Serv	Theoretical ing	
QD038 - Carbohydrates,	Calculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200481-01

Eurofins Sample Code:464-2020-10260Client Sample Code:BFG948179-01Sample Description:Soluble Corn Fil		1	Condition Upon Receipt: acceptable, non-pe			
QD038 - Carbohydrates,	Calculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Carbohydrates, Calculate	d	Result 81.96 %	Per Serving 81.96 g/Servin	Theoretical		
QD153 - Moisture by Ka	rl Fischer	Reference AOCS Ca 2e-8	34	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Moisture, Karl Fischer		Result 5.84 %	Per Serving 5.84 g/Serving	Theoretical		
QD251 - Calcium by ICP		Reference AOAC 984.27 mod,965.17 m	mod,927.02 mod,985.01 od	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Calcium		Result 0.189 %	Per Serving 0.189 g/Servin	Theoretical g		
QD107 - Iron by ICP		Reference AOAC 984.27 mod,965.17 m	mod,927.02 mod,985.01 od	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Iron		Result 0.0168 %	Per Serving 0.0168 g/Servi	Theoretical ng		
QD179 - Potassium by I	CP	Reference AOAC 984.27 mod,965.17 m	mod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Potassium		Result 0.064 %	Per Serving 0.064 g/Servin	Theoretical g		
QD198 - Sodium by ICP		Reference AOAC 984.27 mod,965.17 m	mod,927.02 mod,985.01 od	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Nov2020	
Parameter Sodium		Result 1.98 %	Per Serving 1.98 g/Serving	Theoretical		
QD01T - Total dietary fi (Includes LMWSDF)	ber HPLC	Reference AOAC 2009.0	1 & AOAC 2011.25		Completed 04Nov2020	
Parameter Low molecular wgt solub fiber(LMWSDF)	le dietary	Result 0.34 %	Per Serving 0.34 g/Serving	Theoretical		

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200481-01

Eurofins Sample Code:	464-2020-1026020	04 S	ample Registration I	Date: 26Oct2020		
Client Sample Code: Sample Description:	BFG948179-01 Soluble Corn Fibe		ondition Upon Rece ample Reference:	ipt: acceptable, non-pe BFG	erishable	
QD01T - Total dietary fibe (Includes LMWSDF)		Reference AOAC 2009.01 & /	AOAC 2011.25		Completed 04Nov2020	
Parameter		Result	Per Serving	Theoretical		
High molecular wgt soluble (HMWSDF)	e dietary fiber	76.54 %	76.54 g/Servin	ng		
Insoluble dietary fiber (IDF)	1.65 %	1.65 g/Serving	1		
Soluble Dietary Fiber (LM)	VSDF + HMWSDF	76.88 %	76.88 g/Servir	ng		
Total dietary fiber (IDF + H LMWSDF)	MWSDF +	78.53 %	78.53 g/Servir	ng		
QQ129 - Sugar Profile (A Matrices)		Reference AOAC 982.14, mc	d.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter		Result	Per Serving	Theoretical		
Fructose		<0.15 %	<0.15 g/Servir	ng		
Glucose		<0.15 %	<0.15 g/Servir	ng		
Sucrose		<0.15 %	<0.15 g/Servir	ng		
Maltose		<0.15 %	<0.15 g/Servir	ng		
Lactose		<0.15 %	<0.15 g/Servir	ng		
Total sugars		<0.35 %	<0.35 g/Servir	ng		
QD0EK - Vitamin D (LC-I	NS/MS)	Reference Huang et al., Rapi Spectrum 2014, 2	id Commun. Mass 8	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 31Oct2020	
Parameter Total Vitamin D2 and D3		Result <4 IU/100 g	Per Serving <4.00 IU/Serv	Theoretical ring		
Vitamin D2		<4 IU/100 g	<4.00 IU/Serv	ring		
Vitamin D3		<4 IU/100 g	<4.00 IU/Serv	ring		
QD041 - Cholesterol in F	ood	Reference AOAC 994.10 mo	d.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter		Result	Per Serving	Theoretical		
Cholesterol		<0.8 mg/100 g	<0.8 mg/Serv	ing		
QD036 - Calories From T	fotal Fat, Calc	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter Calories From Total Fat, C		Result 10 kcal/100 g	Per Serving 10 kcal/Servir	Theoretical		

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200481-01

Client Sample Code: BFG948179-01	t Sample Code: BFG948179-01 Condition Upon Receipt: acceptable, n			erishable	
QQ051 - Fatty Acid Composition-Sat,Trans,Poly,Mono,&Tota	Reference AOAC 996.06 mo	od.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter	Result	Per Serving	Theoretical		
cis, cis-Polyunsaturated Fatty Acids	0.17 %	0.17 g/Serving			
cis-Monounsaturated Fatty Acids	0.38 %	0.38 g/Serving			
Total Saturated Fatty Acids	0.52 %	0.52 g/Serving			
Total Fat as Triglycerides	1.16 %	1.16 g/Serving			
Total Trans Fatty Acid Isomers - GC	0.04 %	0.04 g/Serving			
QAA07 - Vomitoxin (Deoxynivalenol, DON) LC-MSMS	Reference Food Addit Conta 2013:30(3),541-5		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter	Result	Per Serving	Theoretical		
Vomitoxin (Deoxynivalenol)	<10 µg/kg	<10 µg/kg			
QAA19 - Zearalenone (LC-MSMS)	Reference Food Addit Conta 2013:30(3),541-5		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter Zearalenone	Result <5.0 µg/kg	Per Serving <5.0 μg/kg	Theoretical		
QA01P - Pesticides Quechers GC-MSMS	Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter	Result	Per Serving	Theoretical		
Screened pesticides	Not Detected	Not detected			
QA01R - Pesticides Quechers-LC-MS/MS	Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter	Result	Per Serving	Theoretical		
Screened pesticides	Not Detected	Not detected			
QD03M - Nutrition Facts Panel	Reference Genesis			Completed 26Oct2020	
Parameter	Result	Per Serving	Theoretical		
Nutrition Label Format Report	requested	requested			

ANALYTICAL REPORT

AR-20-QD-200481-01

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

> Received On: 26Oct2020 Reported On: 09Nov2020

Subcontracting partners:

1 - Eurofins Central Analytical Laboratories, LA

Respectfully Submitted,

Brian Schuld Analytical Services Manager

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AgriFiber Solutions LLC

Adam Blackshaw

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Mundelein, IL 60060

Eurofins Scientific Inc. (Des Moines)

2200 Rittenhouse Street Suite 150 Des Moines, IA 50321 +1 515 265 1461 ENACClientServices@EurofinsUS.com

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200482-01

ANALYTICAL REPORT

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-1026 BFG948779-07 Soluble Corn F	1	Sample Registration D Condition Upon Recei Sample Reference:	Date: 26Oct2020 pt: acceptable, non-pe BFG	rishable
QD275 - Serving Size (C Supplied)	ustomer	Reference No Reference			Completed 28Oct2020
Parameter Unit weight		Result 100.0000 g	Per Serving 100.0000 g	Theoretical g	
Units per serving		1	1	1	
Serving Size		100.00 g	100.00 g	100 g/Serving	
QD252 - Protein - Comb	ustion	Reference AOAC 990.03;	AOAC 992.15	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 29Oct2020
Parameter Protein		Result 5.56 %	Per Serving 5.56 g/Serving	Theoretical	
Nitrogen - Combustion		0.89 %	0.89 g/Serving		
Protein Factor		6.25	6.25		
QD250 - Ash		Reference AOAC 942.05		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 29Oct2020
Parameter Ash		Result 4.58 %	Per Serving 4.58 g/Serving	Theoretical	
QD226 - Calories, Calcu	lated	Reference CFR - Atwater	calculation	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Calories Calculated		Result 207 kcal/100	g 207 kcal/Serving	Theoretical ng	
QD038 - Carbohydrates	Calculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020

AgriFiber Solutions LLC

Adam Blackshaw 1011 Campus Drive Mundelein, IL 60060

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200482-01

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-1026 BFG948779-01 Soluble Corn F	1	Sample Registration D Condition Upon Recei Sample Reference:		erishable	
QD038 - Carbohydrates,	Calculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Carbohydrates, Calculated	d	Result 84.97 %	Per Serving 84.97 g/Serving	Theoretical		
QD153 - Moisture by Kar	rl Fischer	Reference AOCS Ca 2e-84		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020	
Parameter Moisture, Karl Fischer		Result 3.67 %	Per Serving 3.67 g/Serving	Theoretical		
QD251 - Calcium by ICP		Reference AOAC 984.27 m mod,965.17 mo		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 02Nov2020	
Parameter Calcium		Result 0.209 %	Per Serving 0.209 g/Servin	Theoretical g		
QD107 - Iron by ICP		Reference AOAC 984.27 n mod,965.17 mo	nod,927.02 mod,985.01 d	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 02Nov2020	
Parameter Iron		Result 0.0023 %	Per Serving 0.0023 g/Servi	Theoretical ng		
QD179 - Potassium by I	CP	Reference AOAC 984.27 n mod,965.17 mo	nod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 02Nov2020	
Parameter Potassium		Result 0.063 %	Per Serving 0.063 g/Servin	Theoretical g		
QD198 - Sodium by ICP		Reference AOAC 984.27 r mod,965.17 mc	nod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 03Nov2020	
Parameter Sodium		Result 1.63 %	Per Serving 1.63 g/Serving	Theoretical		
QD01T - Total dietary fil (Includes LMWSDF)	per HPLC	Reference AOAC 2009.01	& AOAC 2011.25		Completed 04Nov2020	
Parameter Low molecular wgt solubl fiber(LMWSDF)	le dietary	Result 0.35 %	Per Serving 0.35 g/Serving	Theoretical		

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200482-01

Client Sample Code:	464-2020-1026 BFG948779-01 Soluble Corn F		Sample Registration Dat Condition Upon Receipt Sample Reference:		erishable	
QD01T - Total dietary fibe (Includes LMWSDF)	r HPLC	Reference AOAC 2009.01	& AOAC 2011.25		Completed 04Nov2020	
Parameter High molecular wgt soluble HMWSDF)	dietary fiber	Result 79.92 %	Per Serving 79.92 g/Serving	Theoretical		
nsoluble dietary fiber (IDF))	1.34 %	1.34 g/Serving			
Soluble Dietary Fiber (LMV	VSDF + HMWSI	OF) 80.27 %	80.27 g/Serving			
Total dietary fiber (IDF + HI _MWSDF)		81.61 %	81.61 g/Serving			
QQ129 - Sugar Profile (A0 Matrices)	OAC, Most	Reference AOAC 982.14,	mod. IS	ccreditation SO/IEC 17025:2017 2LA 2927.01	Completed 04Nov2020	
Parameter		Result	Per Serving	Theoretical		
Fructose		<0.15 %	<0.15 g/Serving			
Glucose		<0.15 %	<0.15 g/Serving			
Sucrose		<0.15 %	<0.15 g/Serving			
Maltose		<0.15 %	<0.15 g/Serving			
Lactose		<0.15 %	<0.15 g/Serving			
Total sugars		<0.35 %	<0.35 g/Serving			
QD0EK - Vitamin D (LC-₩	IS/MS)	Reference Huang et al., F Spectrum 2014	Rapid Commun. Mass	SO/IEC 17025:2017 2LA 2927.01	Completed 31Oct2020	
Parameter		Result	Per Serving	Theoretical		
Total Vitamin D2 and D3		<4 IU/100 g	<4.00 IU/Serving			
Vitamin D2		<4 IU/100 g	<4.00 IU/Serving			
Vitamin D3		<4 IU/100 g	<4.00 IU/Serving			
QD041 - Cholesterol in Fo	ood	Reference AOAC 994.10	mod.	Accreditation SO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter		Result	Per Serving	Theoretical		
Cholesterol		<0.8 mg/100				
QD036 - Calories From T	otal Fat, Calc	Reference CFR 21-calc.		Accreditation SO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter Calories From Total Fat, C	alc	Result 11 kcal/100	g 11 kcal/Serving	Theoretical		

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200482-01

Client Sample Code: BF	4-2020-102602 G948779-01 Iuble Corn Fibe	Condition Upon Receipt: acceptable, non-perishable				
QQ051 - Fatty Acid Composition-Sat,Trans,Poly I	, <mark>Mono,&</mark> Tota	Reference AOAC 996.06 n	nod.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020	
Parameter cis, cis-Polyunsaturated Fatty	Acids	Result 0.19 %	Per Serving 0.19 g/Servi			
cis-Monounsaturated Fatty Ac	ids	0.42 %	0.42 g/Servi	ng		
Total Saturated Fatty Acids		0.53 %	0.53 g/Servi	ng		
Total Fat as Triglycerides		1.22 %	1.22 g/Servi	ng		
Total Trans Fatty Acid Isomers	s - GC	0.03 %	0.03 g/Servi	ng		
QAA07 - Vomitoxin (Deoxyn DON) LC-MSMS	ivalenol,	Reference Food Addit Con 2013:30(3),541		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter Vomitoxin (Deoxynivalenol)		Result <10 µg/kg	Per Serving <10 μg/kg	Theoretical		
QAA19 - Zearalenone (LC-M	ISMS)	Reference Food Addit Con 2013:30(3),541		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1
Parameter Zearalenone		Result <5.0 µg/kg	Per Serving <5.0 μg/kg	Theoretical		
QA01P - Pesticides Queche	rs GC-MSMS	Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sul 1
Parameter Screened pesticides		Result Not Detected	Per Serving Not detecte			
QA01R - Pesticides Queche	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sul 1
Parameter Screened pesticides		Result Not Detected	Per Serving Not detecte			
QD03M - Nutrition Facts Pa	nel	Reference Genesis			Completed 26Oct2020	
Parameter Nutrition Label Format Repor	t	Result requested	Per Serving requested	g Theoretical		

ANALYTICAL REPORT

AR-20-QD-200482-01

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

> Received On: 26Oct2020 Reported On: 09Nov2020

Subcontracting partners:

1 - Eurofins Central Analytical Laboratories, LA

Respectfully Submitted,

Brian Schuld Analytical Services Manager

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AgriFiber Solutions LLC

Adam Blackshaw

1011 Campus Drive

Mundelein, IL 60060

Eurofins Scientific Inc. (Des Moines)

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Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

> Received On: 26Oct2020 Reported On: 09Nov2020

AR-20-QD-200483-01

ANALYTICAL REPORT

Eurofins Sample Code: 464-2020-10260206 Sample Registration Date: 26Oct2020 **Client Sample Code:** BFG948879-01 Condition Upon Receipt: acceptable, non-perishable Sample Description: Sample Reference: BFG Soluble Corn Fiber ss=100g QD275 - Serving Size (Customer Reference Completed No Reference 28Oct2020 Supplied) Parameter Result Per Serving Theoretical Unit weight 100.0000 g 100.0000 g Units per serving 1 1 1 Serving Size 100.00 g 100 g/Serving 100.00 g **QD252 - Protein - Combustion** Reference Accreditation Completed AOAC 990.03; AOAC 992.15 ISO/IEC 17025:2017 29Oct2020 A2LA 2927.01 Parameter Result Per Serving Theoretical Protein 5.19 % 5.19 g/Serving Nitrogen - Combustion 0.83 % 0.83 g/Serving Protein Factor 6.25 6.25 QD250 - Ash Reference Accreditation Completed 29Oct2020 AOAC 942.05 ISO/IEC 17025:2017 A2LA 2927.01 Parameter Result Per Serving Theoretical 4.71 % Ash 4.71 g/Serving QD226 - Calories, Calculated Reference Accreditation Completed 04Nov2020 CFR - Atwater calculation ISO/IEC 17025:2017 A2LA 2927.01 Parameter Result Per Serving Theoretical Calories Calculated 206 kcal/100 g 206 kcal/Serving QD038 - Carbohydrates, Calculated Reference Accreditation Completed 04Nov2020 CFR 21-calc. ISO/IEC 17025:2017 A2LA 2927.01

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200483-01

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-1020 BFG948879-0 Soluble Corn F	1	Sample Registration D Condition Upon Recei Sample Reference:		erishable
QD038 - Carbohydrates,	Calculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Carbohydrates, Calculated	d	Result 84.28 %	Per Serving 84.28 g/Serving	Theoretical	
QD153 - Moisture by Ka	rl Fischer	Reference AOCS Ca 2e-84	4	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Moisture, Karl Fischer		Result 4.84 %	Per Serving 4.84 g/Serving	Theoretical	
QD251 - Calcium by ICP		Reference AOAC 984.27 n mod,965.17 mo	nod,927.02 mod,985.01 od	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Calcium		Result 0.212 %	Per Serving 0.212 g/Serving	Theoretical g	
QD107 - Iron by ICP		Reference AOAC 984.27 n mod,965.17 mc	nod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Iron		Result 0.0034 %	Per Serving 0.0034 g/Servi	Theoretical ng	
QD179 - Potassium by I	CP	Reference AOAC 984.27 r mod,965.17 mc	nod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter Potassium		Result 0.053 %	Per Serving 0.053 g/Servin	Theoretical g	
QD198 - Sodium by ICP		Reference AOAC 984.27 r mod,965.17 mc	mod,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Nov2020
Parameter Sodium		Result 1.68 %	Per Serving 1.68 g/Serving	Theoretical	
QD01T - Total dietary fit (Includes LMWSDF)	per HPLC	Reference AOAC 2009.01	& AOAC 2011.25		Completed 07Nov2020
Parameter Low molecular wgt solubl fiber(LMWSDF)	e dietary	Result 0.30 %	Per Serving 0.30 g/Serving	Theoretical	

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200483-01

Client Sample Code:	464-2020-1026020 BFG948879-01 Soluble Corn Fiber		Sample Registration D Condition Upon Recei Sample Reference:		erishable
QD01T - Total dietary fibe Includes LMWSDF)		Reference AOAC 2009.01	& AOAC 2011.25		Completed 07Nov2020
Parameter High molecular wgt soluble	dietary fiber	Result 78.56 %	Per Serving 78.56 g/Serving	Theoretical	
(HMWSDF)					
nsoluble dietary fiber (IDF)		0.70 %	0.70 g/Serving		
Soluble Dietary Fiber (LMW			78.86 g/Serving		
Total dietary fiber (IDF + HN LMWSDF)	MWSDF +	79.56 %	79.56 g/Serving]	
QQ129 - Sugar Profile (A0 Matrices)		Reference AOAC 982.14, r	nod.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Nov2020
Parameter		Result	Per Serving	Theoretical	
Fructose		<0.15 %	<0.15 g/Serving	g	
Glucose		<0.15 %	<0.15 g/Serving	g	
Sucrose		<0.15 %	<0.15 g/Serving	g	
Maltose		<0.15 %	<0.15 g/Serving	g	
Lactose		<0.15 %	<0.15 g/Serving	g	
Total sugars		<0.35 %	<0.35 g/Servin	g	
QD0EK - Vitamin D (LC-M	IS/MS)	Reference Huang et al., Ra Spectrum 2014	apid Commun. Mass , 28	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 31Oct2020
Parameter Total Vitamin D2 and D3		Result <4 IU/100 g	Per Serving <4.00 IU/Servir	Theoretical ng	
Vitamin D2		<4 IU/100 g	<4.00 IU/Servi	ng	
Vitamin D3		<4 IU/100 g	<4.00 IU/Servi	ng	
QD041 - Cholesterol in Fo	bod	Reference AOAC 994.10 n	nod.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020
Parameter		Result	Per Serving	Theoretical	
Cholesterol		<0.8 mg/100 (ng	
QD036 - Calories From To	otal Fat, Calc	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020
Parameter Calories From Total Fat, Ca		Result 9 kcal/100 g	Per Serving 9 kcal/Serving	Theoretical	

ANALYTICAL REPORT

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

AR-20-QD-200483-01

Client Sample Code:	464-2020-102602 BFG948879-01 Soluble Corn Fibe		Sample Registration Condition Upon Res Sample Reference:	ceipt: acceptable, non-p	pt: acceptable, non-perishable		
QQ051 - Fatty Acid Composition-Sat,Trans,Pc I	oly,Mono,&Tota	Reference AOAC 996.06 r	nod.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Oct2020		
Parameter		Result	Per Serving				
cis, cis-Polyunsaturated Fatty Acids		0.09 %	0.09 g/Serv				
cis-Monounsaturated Fatty Acids		0.33 %	0.33 g/Serv	•			
Total Saturated Fatty Acids		0.48 %	0.48 g/Serv	-			
Total Fat as Triglycerides		0.98 %	0.98 g/Serv	•			
Total Trans Fatty Acid Isomers - GC		0.04 %	0.04 g/Serv	ing			
QAA07 - Vomitoxin (Deox DON) LC-MSMS	ynivalenol,	Reference Food Addit Cor 2013:30(3),541		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1	
Parameter Vomitoxin (Deoxynivalenol)		Result <10 µg/kg	Per Servin <10 µg/kg	g Theoretical			
QAA19 - Zearalenone (LC	-MSMS)	Reference Food Addit Cor 2013:30(3),541		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1	
Parameter Zearalenone		Result <5.0 µg/kg	Per Servin <5.0 μg/kg	g Theoretical			
QA01P - Pesticides Quecl	hers GC-MSMS	Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1	
Parameter Screened pesticides		Result Not Detected	Per Servin Not detecte				
QA01R - Pesticides Quechers-LC-MS/MS		Reference AOAC 2007.01		Accreditation ISO/IEC 17025:2017 A2LA 2993.01	Completed 09Nov2020	Sub 1	
Parameter		Result	Per Servin	g Theoretical			
Screened pesticides		Not Detected					
QD03M - Nutrition Facts Panel		Reference Genesis			Completed 26Oct2020		
Parameter Nutrition Label Format Report		Result requested	Per Servin requested	g Theoretical			

ANALYTICAL REPORT

AR-20-QD-200483-01

Client Code: QD0009451 Number: (3) BFG lots, nutitionals, pesticides

> Received On: 26Oct2020 Reported On: 09Nov2020

Subcontracting partners:

1 - Eurofins Central Analytical Laboratories, LA

Respectfully Submitted,

Brian Schuld Analytical Services Manager

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Eurofins Scientific Inc. (Des Moines)

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> Client Code: QD0009451 PO Number: CBFG2

Received On: 29Jul2020 Reported On: 12Aug2020

Eurofins Sample Code: Client Sample Code: Sample Description: QD275 - Serving Size (Custo	464-2020-07290651 CBFG2 Composite ARABINOXYLO-OLIGOSAC CHARIDE ss=100g omer Reference		Sample Registration Date: 29Jul2020 Condition Upon Receipt: acceptable, non- Sample Reference:		shable Completed
Supplied)		No Reference			30Jul2020
Parameter Unit weight Units per serving Serving Size		Result 100.0000 g 1 100.00 g	Per Serving 100.0000 g 1 100.00 g	Theoretical g 1 100 g/Serving	
QD252 - Protein - Combusti	on	Reference AOAC 990.03; AC	DAC 992.15	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Aug2020
Parameter Protein Nitrogen - Combustion Protein Factor		Result 4.63 % 0.86 % 5.38	Per Serving 4.63 g/Serving 0.86 g/Serving 5.38	Theoretical %	
QD250 - Ash		Reference AOAC 942.05		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 30Jul2020
Parameter Ash		Result 4.91 %	Per Serving 4.91 g/Serving	Theoretical	
QD226 - Calories, Calculate	d	Reference CFR - Atwater cal	culation	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Aug2020
Parameter Calories Calculated Corrected Result		Result 205 kcal/100 g	Per Serving 205 kcal/Serving	Theoretical	

AgriFiber Solutions LLC

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ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Received On: 29Jul2020 Reported On: 12Aug2020

Eurofins Sample Code:	464-2020-07290651	1	Sample Registration Date	: 29Jul2020	
Client Sample Code: Sample Description:	CBFG2 Composite ARABINOXYLO-OL CHARIDE ss=100g		Condition Upon Receipt: Sample Reference:	acceptable, non-per	ishable
QD038 - Carbohydrates, Ca	liculated	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 04Aug2020
Parameter Carbohydrates, Calculated		Result 84.60 %	Per Serving 84.60 g/Serving	Theoretical	
QD148 - Moisture by Vacuu	ım Oven	Reference AOAC 925.09		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 03Aug2020
Parameter Moisture and Volatiles - Vac	uum Oven	Result 4.8 %	Per Serving 4.8 g/Serving	Theoretical	
QD251 - Calcium by ICP		Reference AOAC 984.27 mod mod,965.17 mod	d,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Aug2020
Parameter Calcium		Result 196 mg/100 g	Per Serving 196 mg/Serving	Theoretical	
QD107 - Iron by ICP		Reference AOAC 984.27 mod mod,965.17 mod	d,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Aug2020
Parameter Iron		Result 2.7 mg/100 g	Per Serving 2.7 mg/Serving	Theoretical	
QD179 - Potassium by ICP		Reference AOAC 984.27 mod mod,965.17 mod	d,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Aug2020
Parameter Potassium		Result 59 mg/100 g	Per Serving 59 mg/Serving	Theoretical	
QD198 - Sodium by ICP		Reference AOAC 984.27 mod mod,965.17 mod	d,927.02 mod,985.01	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 05Aug2020
Parameter Sodium		Result 1,700 mg/100 g	Per Serving 1,700 mg/Serving	Theoretical J	
QD01T - Total dietary fiber (Includes LMWSDF)	HPLC	Reference AOAC 2009.01 &	AOAC 2011.25		Completed 05Aug2020
Parameter		Result	Per Serving	Theoretical	

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-072906 CBFG2 Composit ARABINOXYLO-0 CHARIDE ss=100	e DLIGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	29Jul2020 acceptable, non-per	ishable
QD01T - Total dietary fiber I (Includes LMWSDF)	HPLC	Reference AOAC 2009.01 &	AOAC 2011.25		Completed 05Aug2020
Parameter Low molecular wgt soluble d fiber(LMWSDF)	ietary	Result 0.36 %	Per Serving 0.36 g/Serving	Theoretical	
High molecular wgt soluble o (HMWSDF)	lietary fiber	78.97 %	78.97 g/Serving		
Insoluble dietary fiber (IDF)		0.80 %	0.80 g/Serving		
Soluble Dietary Fiber (LMWS	SDF + HMWSDF)	79.33 %	79.33 g/Serving		
Total dietary fiber (IDF + HM LMWSDF)	WSDF +	80.13 %	80.13 g/Serving		
Parameter Fructose		Result <0.15 g/100 g	Per Serving <0.15 g/Serving	Theoretical	
Glucose		<0.15 g/100 g	<0.15 g/Serving		
Sucrose		<0.15 g/100 g	<0.15 g/Serving		
Maltose		<0.15 g/100 g	<0.15 g/Serving		
Lactose		<0.15 g/100 g	<0.15 g/Serving		
Total sugars		<0.35 g/100 g	<0.35 g/Serving		
Parameter Total Vitamin D2 and D3		Result <0.10000 µg/10	Per Serving 00 g <0.1000 μg/Servin	Theoretical g	
Vitamin D2		<0.10000 µg/10	00 g <0.1000 μg/Servin	g	
Vitamin D3		<0.10000 µg/10	00 g <0.1000 μg/Servin	g	
QD041 - Cholesterol in Foo	d	Reference AOAC 994.10 mo	od. IS	Accreditation SO/IEC 17025:2017 A2LA 2927.01	Completed 04Aug2020
Parameter Cholesterol		Result <0.8 mg/100 g	Per Serving <0.8 mg/Serving	Theoretical	

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-07290 CBFG2 Compos ARABINOXYLO- CHARIDE ss=10	ite -OLIGOSAC	Sample Registration Date Condition Upon Receipt: Sample Reference:	29Jul2020 acceptable, non-pe	rishable	
QD036 - Calories From Tota	al Fat, Calc	Reference CFR 21-calc.		Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 31Jul2020	
Parameter Calories From Total Fat, Cal	с.	Result 10 kcal/100 g	Per Serving 10 kcal/Serving	Theoretical		
QQ051 - Fatty Acid Composition-Sat,Trans,Pol	y,Mono,&Total	Reference AOAC 996.06 mod	L.	Accreditation ISO/IEC 17025:2017 A2LA 2927.01	Completed 31Jul2020	
Parameter cis, cis-Polyunsaturated Fatt	y Acids	Result 0.22 %	Per Serving 0.22 g/Serving	Theoretical		
cis-Monounsaturated Fatty A	cids	0.35 %	0.35 g/Serving			
Total Saturated Fatty Acids		0.42 %	0.42 g/Serving			
Total Fat as Triglycerides		1.06 %	1.06 g/Serving			
Total Trans Fatty Acid Isome	rs - GC	0.03 %	0.03 g/Serving			
QA01P - Pesticides Queche	ers GC-MSMS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter 2,3,5,6-Tetrachloroaniline		Result <0.01 mg/kg	Per Serving <0.01 mg/kg	Theoretical		
Acephate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Acetochlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aclonifen		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Acrinathrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aldrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Allethrin		<0.050 mg/kg	<0.050 mg/kg	mg/kg		
Ametryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Atrazine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azaconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azinphos-ethyl (Ethyl Guthio	n)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azinphos-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Benalaxyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Benfluralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bifenox		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bifenthrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code:464-2020-0729065Client Sample Code:CBFG2 CompositeSample Description:ARABINOXYLO-OICHARIDE ss=100g		Condition Upon Receipt: LIGOSAC Sample Reference:		29Jul2020 acceptable, non-perishable		
QA01P - Pesticides Quech		ence 2007.01	A	ccreditation 2LA ISO/IEC 7025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter	Res		Per Serving	Theoretical		
Bromocyclen		10 mg/kg	<0.010 mg/kg	mg/kg		
Bromophos		10 mg/kg	<0.010 mg/kg	mg/kg		
Bromophos-ethyl		10 mg/kg	<0.010 mg/kg	mg/kg		
Bromopropylate		10 mg/kg	<0.010 mg/kg	mg/kg		
Butachlor		10 mg/kg	<0.010 mg/kg	mg/kg		
Butafenacil		10 mg/kg	<0.010 mg/kg	mg/kg		
Butylate		10 mg/kg	<0.001 mg/Serving			
Cadusaphos		10 mg/kg	<0.010 mg/kg	mg/kg		
Captafol		20 mg/kg	<0.020 mg/kg	mg/kg		
Captan		20 mg/kg	<0.020 mg/kg	mg/kg		
Carbetamide		10 mg/kg	<0.001 mg/Serving			
Carbophenothion		10 mg/kg	<0.010 mg/kg	mg/kg		
Carbophenothion-methyl		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlordane, cis-		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlordane, oxy-		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlordane, trans-		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlordene, beta		10 mg/kg	<0.001 mg/Serving			
Chlordene, gamma-		10 mg/kg	<0.001 mg/Serving			
Chlordimeform		10 mg/kg	<0.001 mg/Serving			
Chlorethoxyfos		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorfenapyr		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorfenson		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorobenzilate		10 mg/kg	<0.010 mg/kg	mg/kg		
Chloroneb		10 mg/kg	<0.010 mg/kg	mg/kg		
Chloropropylate		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorothalonil		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorpropham (CIPC)		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorpyrifos		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorpyrifos-methyl		10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorthal-dimethyl)10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorthiofos)10 mg/kg	<0.010 mg/kg	mg/kg		
Chlorthion	<0.0)10 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code:464-2020-0729065Client Sample Code:CBFG2 CompositeSample Description:ARABINOXYLO-OLCHARIDE ss=100g		Condition Upon Receipt: LIGOSAC Sample Reference:			29Jul2020 acceptable, non-perishable		
QA01P - Pesticides Quech	ers GC-MSMS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1	
Parameter		Result	Per Serving	Theoretical			
Chlozolinate		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cloquintocet-mexyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Coumaphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Crimidine		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Crotoxyphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cyanazine		<0.050 mg/kg	<0.050 mg/kg	mg/kg			
Cyanofenphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cyanophos		<0.050 mg/kg	<0.050 mg/kg	mg/kg			
Cyfluthrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cyhalofop-butyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cyhalothrin lambda-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Cypermethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
DDE, p,p'-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
DDT, o,p'-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
DEF (Butifos)		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Deltamethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Demeton-O		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Demeton-S		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Demeton-S-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dialifos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Diallate		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Diazinon (O Analog)		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dichlobenil		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dichlofenthion		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dichlofluanid		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dichlone		<0.050 mg/kg	<0.050 mg/kg	mg/kg			
Dichlorvos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Diclobutrazol		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dicloran		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dicofol, p,p-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dicrotophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Dieldrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-07290 CBFG2 Composi ARABINOXYLO- CHARIDE ss=10	ite -OLIGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	29Jul2020 acceptable, non-per	ishable	
QA01P - Pesticides Quech	ers GC-MSMS	Reference AOAC 2007.01	A2	creditation LA ISO/IEC 025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Diflufenican		Result <0.010 mg/kg	Per Serving <0.010 mg/kg	Theoretical mg/kg		
Dimethachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dimethenamid including oth constitue	er mixtures of	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dimoxystrobin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dioxathion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diphenamid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diphenyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diphenylamine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dipropetryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Disulfoton		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Disulfoton-PS-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endosulfan I (alpha-endosu	lfan)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endosulfan II (beta-Endosul	fan)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endosulfan sulphate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endrin ketone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Endrin-aldehyde		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
EPN		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
EPTC		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Esfenvalerate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethalfluralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethoprophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethoxyquin		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Etoxazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Etridiazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Etrimfos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Famophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Famoxadone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenamidone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenchlorphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenfluthrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code:464-2020-0729065Client Sample Code:CBFG2 CompositeSample Description:ARABINOXYLO-OICHARIDE ss=100g		IGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	29Jul2020 acceptable, non-peris	shable	
QA01P - Pesticides Quech	ers GC-MSMS	Reference AOAC 2007.01	A	ccreditation 2LA ISO/IEC 7025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Fenitrothion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenoxaprop-p-ethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenpropathrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenson		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fensulfothion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenthion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenvalerate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fipronil		<0.005 mg/kg	<0.005 mg/kg	mg/kg		
Fluazifop-P-butyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluchloralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flucythrinate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluensulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flumioxazin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluotrimazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluquinconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flutolanil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flutriafol		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluvalinate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Folpet		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fonofos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Gamma-cyhalothrin		<0.010 mg/kg	<0.001 mg/Serving	n mg/kg		
gamma-HCH (Lindane)		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Halfenprox		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
HCH, alpha-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
HCH, beta-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
HCH, delta-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Heptachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Heptachlor Epoxide (cis, tra	ns)	<0.010 mg/kg	<0.001 mg/Serving	ı mg/kg		
Hexachlorobenzene (HCB)		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Hexazinone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Hydroprene		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Iprobenfos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	CBFG2 Composite C		Sample Registration Date: Condition Upon Receipt: Sample Reference:	29Jul2020 acceptable, non-perishable		
QA01P - Pesticides Quech	ers GC-MSMS	Reference AOAC 2007.01	A	ccreditation 2LA ISO/IEC 7025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Iprodione		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isazophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isocarbamid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isocarbofos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isodrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isofenphos-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isopropalin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoprothiolane		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoxadifen-ethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Lenacil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Leptophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Malathion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Mefenpyr-diethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Mepronil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metazachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methacriphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methamidophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methoprothryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methoxychlor, o,o'		<0.010 mg/kg	<0.001 mg/Serving			
Methoxychlor, p,p'		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Mevinphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Mexacarbate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
MGK-264		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Mirex		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Monocrotophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Naproanilide		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Napropamide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nitralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nitrapyrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nitrofen		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nitrothal-isopropyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nonachlor, cis-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code:464-2020-0729065Client Sample Code:CBFG2 CompositeSample Description:ARABINOXYLO-OICHARIDE ss=100g		ie DLIGOSAC	LIGOSAC Sample Reference:		29Jul2020 acceptable, non-perishable		
QA01P - Pesticides Quech	ers GC-MSMS	Reference AOAC 2007.01	A2	creditation 2LA ISO/IEC 025:2005 2993-01	Completed 06Aug2020	Sub 1	
Parameter Nonachlor, trans-		Result	Per Serving	Theoretical			
·		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Norea Norflurazon		<0.010 mg/kg <0.010 mg/kg	<0.001 mg/Serving	mg/kg			
		<0.010 mg/kg <0.010 mg/kg	<0.010 mg/kg <0.010 mg/kg	mg/kg			
DDD, o,p'-		<0.010 mg/kg		mg/kg			
DDE, o,p'-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Ofurace		<0.010 mg/kg <0.010 mg/kg	<0.010 mg/kg <0.010 mg/kg	mg/kg			
Omethoate				mg/kg			
o-Phenylphenol		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Oxyfluorfen		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
DDD, p,p'-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
DDT, p,p'-		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Paclobutrazol		<0.010 mg/kg <0.010 mg/kg	<0.010 mg/kg	mg/kg			
Parathion			<0.010 mg/kg	mg/kg			
Parathion oxygen analog		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Parathion-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Parathion-methyl oxygen ar	nalog	<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 101		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 138		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 153		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 180		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 28		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
PCB 52		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pebulate		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pentachloranisole		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pentachloroaniline		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pentachlorobenzene		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pentachlorobenzonitrile		<0.010 mg/kg	<0.001 mg/Serving	mg/kg			
Pentachlorothioanisole		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Penthiopyrad		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Permethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Perthane		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phenothrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	ode: CBFG2 Composite		Sample Registration Date: Condition Upon Receipt: Sample Reference:		29Jul2020 acceptable, non-perishable		
QA01P - Pesticides Quecher		Reference AOAC 2007.01	/	Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1	
Parameter		Result	Per Serving	Theoretical			
Phenthoate		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phorate		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phorate-O-analogue		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phorate-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phosmet		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Phosphamidon		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Picolinafen		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Picoxystrobin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Piperophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Prallethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Procymidone		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Profenofos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Profluralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Prometryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Propachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Propazine		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Propetamphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Propyzamide		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Prothioconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Prothiofos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pyraflufen-ethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pyrazophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pyridalyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Pyrifenox		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Quinalphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Quinomethionate (Morestan)		<0.010 mg/kg	<0.001 mg/Servin	g mg/kg			
Quintozene		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Quizalofop-P-ethyl		<0.010 mg/kg	<0.001 mg/Servin	g mg/kg			
Resmethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
S 421 (Octachlordipropylethe	r)	<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Secbumeton		<0.010 mg/kg	<0.010 mg/kg	mg/kg			
Silaneophan		<0.010 mg/kg	<0.010 mg/kg	mg/kg			

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-07290 CBFG2 Compos ARABINOXYLO CHARIDE ss=10	site Co -OLIGOSAC Sa	ample Registration Date: ondition Upon Receipt: ample Reference:	29Jul2020 acceptable, non-peri	shable	
QA01P - Pesticides Queche	ers GC-MSMS	Reference AOAC 2007.01	A	ccreditation 2LA ISO/IEC 7025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Silthiofam		Result <0.010 mg/kg	Per Serving <0.010 mg/kg	Theoretical mg/kg		
Simazine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tebupirimfos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tecnazene		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tefluthrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Terbacil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Terbuthylazine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tetrachloroaniline, 2,3,4,6-		<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Tetradifon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tetrahydrophthalimide (THPI)	<0.010 mg/kg	<0.001 mg/Serving	mg/kg		
Tetramethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tetrasul		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiometon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thionazin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tolclofos-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tolylfluanid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tralomethrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Transfluthrin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triazophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tribufos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trichlorfon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trichloronat		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trifluralin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triticonazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Vinclozolin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
QAA07 - Vomitoxin (Deoxyr DON) LC-MSMS	nivalenol,	Reference Food Addit Contam F 2013:30(3),541-9.	Part A, A	ccreditation 2LA ISO/IEC 7025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Vomitoxin (Deoxynivalenol)		Result ≺10 µg/kg	Per Serving <10 μg/kg	Theoretical μg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-072906 CBFG2 Composit ARABINOXYLO-0	e DLIGOSAC	Sample Registration Date Condition Upon Receipt: Sample Reference:	e: 29Jul2020 acceptable, non-pe	rishable	
QAA19 - Zearalenone (LC-	CHARIDE ss=100 MSMS)	Jg Reference Food Addit Conta 2013:30(3),541-9		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Zearalenone		Result <5.0 µg/kg	Per Serving <5.0 μg/kg	Theoretical µg/kg		
QA01R - Pesticides Quech	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Penflufen		Result <0.010 mg/kg	Per Serving <0.010 mg/kg	Theoretical mg/kg		
Propamocarb (Sum of prop salts, exp	amocarb and its	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flubendiamide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Formetanate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Mandipropamid (any ratio o isomers)	f constituent	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metaflumizone (sum of E- a	ind Z- isomers)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
propisochlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Sulfentrazone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dinotefuran		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Benfuracarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluopyram		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluxapyroxad		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Sulfoxaflor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Chlorantraniliprole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cyantraniliprole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flupyradifurone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Novaluron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Rimsulfuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Spinetoram		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Spirotetramat		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tolfenpyrad		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Alachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Climbazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Clodinafop-propargyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Demeton-S-methyl-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Demeton-S-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

C	Eurofins Sample Code: Client Sample Code: Sample Description:	Code: CBFG2 Composite		Sample Registration Date: Condition Upon Receipt: Sample Reference:		29Jul2020 acceptable, non-perishable			
C	QA01R - Pesticides Queche	rs-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1		
P	Parameter		Result	Per Serving	Theoretical				
C	Desmetryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
C	Dimethametryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
C	Dimethylvinphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
E	Etobenzanid		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
ls	sofenphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
Ν	lecarbam		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
Ν	laled		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
Ν	Japhthalene Acetamide		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Phenkapton		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Promecarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Prometon		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Propanil		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Propaquizafop		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Propargite		<0.020 mg/kg	<0.020 mg/kg	mg/kg				
F	Propham		<0.050 mg/kg	<0.050 mg/kg	mg/kg				
F	Propiconazole (sum of isome	ers)	<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Propoxur		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Proquinazid		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Prosulfocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pymetrozine		<0.020 mg/kg	<0.020 mg/kg	mg/kg				
F	Pyraclostrobin		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pyridaben		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pyridaphenthion		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pyridate		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pyrimethanil		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Pyriproxyfen		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
C	Quinoxyfen		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
F	Rotenone		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
S	Sethoxydim		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
S	Simetryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
S	Spinosad		<0.010 mg/kg	<0.010 mg/kg	mg/kg				
S	Spirodiclofen		<0.010 mg/kg	<0.010 mg/kg	mg/kg				

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-0729065 CBFG2 Composite ARABINOXYLO-O CHARIDE ss=100g	LIGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-per	ishable	
QA01R - Pesticides Quech	ners-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Spiromesifen		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Spiroxamine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Sulfotep		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Sulprofos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tebuconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tebufenozide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tebufenpyrad		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tebuthiuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Teflubenzuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tepraloxydim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Terbufos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Terbumeton		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Terbutryn		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tetrachlorvinphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tetraconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiabendazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiacloprid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiamethoxam		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiobencarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiodicarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiofanox-sulfoxide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Thiophanate-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tralkoxydim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triadimefon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triadimenol		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triallate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triazamate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tricyclazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Tridemorph		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trifloxystrobin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triflumizole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Triflumuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-0729065 CBFG2 Composite ARABINOXYLO-OL CHARIDE ss=100g		Sample Registration Date Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-peris	shable	
QA01R - Pesticides Quech	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Triforine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trimethacarb 2.3.5-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Trimethacarb, 3,4,5-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Uniconazole-P		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
1-Naphthol		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
3-Hydroxycarbofuran		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
3-ketocarbofuran		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Abamectin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Acetamiprid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Acibenzolar-s-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aldicarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aldicarb-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aldicarb-sulfoxide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Aminocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Amitraz		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azadirachtin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azinphos-methyl oxon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Azoxystrobin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bendiocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bensulide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bifenazate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bitertanol		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Boscalid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bromuconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Bupirimate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Buprofezin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Butocarboxim-sulfoxide		<0.050 mg/kg	<0.050 mg/kg	mg/kg		
Carbaryl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Carbendazim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Carbofuran		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Carbofuran (Phenol)		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Carbosulfan		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-072906 CBFG2 Composi ARABINOXYLO- CHARIDE ss=100	te OLIGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-pei	ishable	
QA01R - Pesticides Quech	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Carboxin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Carfentrazone-ethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Chlorfenvinphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Chloridazone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Chloroxuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Clethodim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Clofentezine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Clomazone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Clothianidin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cyazofamid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cycloate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cycloxydim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cymoxanil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cyproconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cyprodinil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Cyromazine		<0.050 mg/kg	<0.050 mg/kg	mg/kg		
Desmedipham		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pirimicarb, desmethyl-forma	amido-	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pirimicarb, desmethyl-		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diafenthiuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diazinon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diethofencarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Difenoconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diflubenzuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dimethoate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dimethomorph		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diniconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dioxacarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Diuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Dodine		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Edifenphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Epoxiconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-07290651 CBFG2 Composite ARABINOXYLO-OLIG CHARIDE ss=100g	GOSAC	Sample Registration Date Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-peris	hable	
QA01R - Pesticides Quecher		Reference NOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Etaconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethiofencarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethiofencarb-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethiofencarb-sulfoxide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Ethofumesate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Etofenprox		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenamiphos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenarimol		<0.020 mg/kg	<0.020 mg/kg	mg/kg		
Fenazaquin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenbuconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenhexamid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenobucarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenoxycarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenpropimorph		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fenpyroximate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flonicamid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fludioxonil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flufenacet		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flufenoxuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluopicolide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Flusilazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fluthiacet-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Forchlorfenuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Fosthiazate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Furalaxyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Furathiocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Heptenophos		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Hexaconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Hexaflumuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Hexythiazox		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Imazalil (any ratio of constitue	ent isomers)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Imidacloprid		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-072906 CBFG2 Composi ARABINOXYLO- CHARIDE ss=100	te OLIGOSAC	Sample Registration Date: Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-per	ishable	
QA01R - Pesticides Quech	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter		Result	Per Serving	Theoretical		
Indoxacarb (sum, R+S isom	iers)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Iprovalicarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoprocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoproturon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoxaben		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Isoxaflutole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Kresoxim-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Linuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Lufenuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Malaoxon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Mepanipyrim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metalaxyl and Metalaxyl-M	(sum)	<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metamitron		<0.050 mg/kg	<0.050 mg/kg	mg/kg		
Methabenztiazuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methidathion		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methiocarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methiocarb-sulfone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methiocarb sulfoxide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methomyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Methoxyfenozide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metolachlor		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metolcarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metoxuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Metribuzin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Molinate		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Monolinuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Myclobutanil		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Neburon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Nitenpyram		<0.050 mg/kg	<0.050 mg/kg	mg/kg		
Nuarimol		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Oxadiazon		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Oxadixyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Client Code: QD0009451 PO Number: CBFG2

Received On: 29Jul2020 Reported On: 12Aug2020

Eurofins Sample Code: Client Sample Code: Sample Description:	464-2020-072906 CBFG2 Composit ARABINOXYLO-0 CHARIDE ss=100	e DLIGOSAC	Sample Registration Date Condition Upon Receipt: Sample Reference:	: 29Jul2020 acceptable, non-per	ishable	
QA01R - Pesticides Quech	ers-LC-MS/MS	Reference AOAC 2007.01		Accreditation A2LA ISO/IEC 17025:2005 2993-01	Completed 06Aug2020	Sub 1
Parameter Oxamyl		Result <0.010 mg/kg	Per Serving <0.010 mg/kg	Theoretical mg/kg		
Oxydemeton-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Penconazole		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pencycuron		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pendimethalin		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Phenmedipham		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Phorate-sulfoxide		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Phosalone		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Piperonyl butoxide (PBO)		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pirimicarb		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pirimiphos-methyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Pirimiphos-ethyl		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Prochloraz		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
Profoxydim		<0.010 mg/kg	<0.010 mg/kg	mg/kg		
QD03M - Nutrition Facts P	anel	Reference Genesis			Completed 30Jul2020	
Parameter Nutrition Label Format Rep	ort	Result Requested	Per Serving Requested	Theoretical		

Comments:

Updated protein factor + calculation for dietary fiber per client.

Subcontracting partners:

1 - Eurofins Central Analytical Laboratories, LA

ANALYTICAL REPORT

AR-20-QD-137885-02 Report Supersedes AR-20-QD-137885-01 Received On: 29Jul2020 Reported On: 12Aug2020

Respectfully Submitted,



David Gross Support Services Manager

Results shown in this report relate solely to the item submitted for analysis. | Any opinions/interpretations expressed on this report are given independent of the laboratory's scope of accreditation. | All results are reported on an "As Received" basis unless otherwise stated. | Reports shall not be reproduced except in full without written permission of Eurofins Scientific, Inc. | All work done in accordance with Eurofins General Terms and Conditions of Sale : www.eurofinsus.com/terms and conditions.pdf | $\sqrt{$ Indicates a subcontract test to a different lab. Lab(s) are listed at end of the report. For further details about the performing labs please contact your customer service contact at Eurofins. Measurement of uncertainty can be obtained upon request.

EXHIBIT II.

Estimated Daily Intake of Corn Bran Arabinoxylan (Exponent, 2022)

Exponent[®]

То:	Jonathan Kahn, CEO, AgriFiber Solutions LLC
From:	Exponent, Inc.
Date:	May 26, 2022
PROJECT:	2009655.000
SUBJECT:	Estimated Daily Intake (EDI) of AgriFiber Soluble Fiber Corn (SFC)

EXTERNAL MEMORANDUM

Introduction

At the request of AgriFiber Solutions LLC ("AgriFiber"), Exponent, Inc. ("Exponent") calculated the estimated daily intake (EDI) of soluble fiber corn (SFC) assuming proposed uses of SFC in select foods as defined in Table 1. These estimates were developed to support preparation of a Generally Recognized As Safe (GRAS) notification. In this memorandum, the food consumption data and methods that are used to conduct the intake assessment and the results are summarized.

Proposed Uses and Use Levels

SFC is intended for use in 31 food and beverage categories as presented in Table 1. The proposed use level of SFC ranges from 0.75% to 54.3% in the finished product (i.e., food as consumed).

Consumption Data

The EDI of SFC from proposed food and beverage uses was derived from food consumption records collected in the What We Eat in America (WWEIA) component of the National Health and Nutrition Examination Survey (NHANES) conducted in the combined survey periods of 2015-2016 and 2017-2018 (WWEIA, NHANES 2015-2018). This continuous survey uses a complex multistage probability sample designed to be representative of the civilian U.S. population (CDC 2018, 2020). The NHANES datasets provide nationally representative

nutrition and health data and prevalence estimates for nutrition and health status measures in the United States.

As part of the examination, trained dietary interviewers collected detailed information on all foods and beverages consumed by respondents in the previous 24-hour time period (midnight to midnight). A second dietary recall was administered by telephone three to ten days after the first dietary interview, but not on the same day of the week as the first interview. The dietary component of the survey is conducted as a partnership between the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (DHHS). The DHHS is responsible for the sample design and data collection, and the USDA is responsible for the survey's dietary data collection methodology, maintenance of the databases used to code and process the data, and data review and processing. A total of 13,666 individuals in the survey period 2015-2018 provided two complete days of dietary recalls.

Food Selection

Exponent reviewed all foods reported consumed during WWEIA, NHANES 2015-2018 that corresponded to any of the proposed uses of SFC. Foods in which one or more components of the food corresponded to a proposed use of SFC (i.e., bread, cheese, and/or mayonnaise in sandwiches or burgers) were also identified through the U.S. Department of Agriculture's Food and Nutrient Database for Dietary Studies (FNDDS) databases that translate foods as reported consumed into one or more ingredients (and gram amounts) or recipes. The proportion of foods (as a percentage of total weight) corresponding to the proposed uses of SFC was identified and only this portion of the food weight was included in the assessment to estimate SFC intake. Exponent applied FNDDS version 2017-2018 recipes (USDA 2018a) to process dietary recall data reported in NHANES 2015-2018 and FNDDS version 2015-2016 recipes (USDA 2018b) for foods that were only reported consumed in NHANES 2015-2016. The list of NHANES food codes included in the analysis is provided in Appendix A.

Estimating Intake of SFC

For each WWEIA, NHANES respondent on each day of dietary recall, SFC intake was calculated as the amount consumed of the food or beverage (in grams) with proposed uses of SFC multiplied by the corresponding maximum use level of SFC per food. Contributions from all foods consumed during the two days of recall were summed and the resulting value was divided by two to derive an estimate of 2-day average intake for each respondent.

Absolute and body weight (bw) adjusted intake estimates of SFC were calculated on a *per user* basis for the U.S. population one year and older and the following subgroups: children (1-5 y and 6-12 y), adolescents (13-18 y), and adults (19+ y). *Per user* estimates refer to the consumption among those who reported consuming the food(s) or beverage(s) of interest on either of the survey days. Intake estimates on a body weight basis were based on each participant's measured bodyweight. The analysis was limited to individuals who provided two complete and reliable dietary recalls as determined by NCHS. The 2-day average intakes by each individual were estimated using Exponent's Foods Analysis and Residues Evaluation Program (FARE[®] version 14.06). Exponent used the statistically weighted values from the survey in its analyses. The statistical weights compensate for variable probabilities of participant selection, adjust for non-response, and provide intake estimates that are representative of the U.S. population.

Flagging of Statistically Unreliable Estimates

Intake estimates that may be less statistically reliable are flagged in the summary tables provided in the results section below. The flagging of statistically unreliable estimates was based on guidance from NCHS (CDC 1996). Specifically, estimates of mean consumption are flagged when based on a sample size of less than 30 times the variance inflation factor (VIF), and estimates of 90th percentile of consumption are flagged when based on a sample size of less than 8 times the VIF and divided by 0.10. A VIF estimate of 2.52 was estimated by USDA for NHANES 2015-2018 (USDA 2021), and using this VIF, the estimated mean consumption is flagged when based on a sample size of less than 76 (30 x 2.52). Similarly, using a VIF of 2.52,

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estimated 90th percentile of consumption is flagged when based on a sample size of less than 202 (8 x 2.52/0.10).

Results

The 2-day average SFC intake estimates were calculated based on food consumption data collected during WWEIA, NHANES 2015-2018 and the maximum proposed use level of SFC (see Table 1). The *per user* mean and 90th percentile estimates of SFC from all proposed uses and by proposed food uses are summarized in Tables 2 and 3, respectively.

Among the U.S. population one year and older (1+ y), 100% of the population reported intake of one or more foods and/or beverages with proposed uses of SFC on either of the two days of recall. The mean and 90th percentile intake of SFC among the total U.S. population (1+ y) is 21.6 g/day (0.37 g/kg-bw/day) and 35.3 g/day (0.73 g/kg-bw/day), respectively.

Table 1. SFC food uses and use levels

Food use type	Description of Foods Selected for Analysis	SFC Maximum Use Level in Finished Product ^a
Baked goods and baking mixes	Yeast breads, rolls and buns, tortillas, bagels, English muffins, biscuits, muffins, quick breads, cakes and pies, cookies and brownies, pancakes, waffles, French toast, doughnuts, sweet rolls, pastries	3.8 g/serving (3 – 54.3%) ^b
Beverages and beverage bases	Fruit drinks and fruit flavored drinks, energy drinks	1.0%
Cheese	All cheeses, including cottage/ricotta cheese, cream cheese, cheese spreads, soybean curd cheese, and imitation cheese	0.75%
Candies and confections	Candy containing and not containing chocolate including chewing gum	1.0%
Coatings and Breadings for meat, poultry, and vegetables	All coatings and breadings for meat, poultry, fish, and vegetables	2.0%
Custards, puddings, and gelatin desserts	Custards, puddings, flan, mousse, and gelatin desserts	3.0%
Dairy products	Cream and cream substitutes (e.g., half and half, heavy cream, coffee creamer), sour cream, and whipped cream	1.5%
Dips	All dips including chipotle dip, dill dip, ranch dip, spinach dip, tzatziki dip, onion dip, seafood dip, salsa, guacamole, hummus, bean dip, layer dip, cheese dip, caramel dip, and dessert dip	3.0%
Egg Products	Egg substitute omelets, scrambled, or fried; egg casserole/souffle, quiches, and egg foo young	1.5%
Filling, baked goods	Fillings in cakes and pies, cupcakes, cookies, pastries, doughnuts, and breakfast bars	3.0%
Flavored and non-flavored soy milk	Flavored and non-flavored soy milk	1.5%
Flavored milk and milk drinks	Flavored milk and milk drinks including chocolate milk, hot chocolate, strawberry milk, eggnog, kefir, malted milk, and bottled or prepared milk shakes	1.5%
Frozen dairy desserts	Ice cream and ice cream novelties, frozen yogurt, gelato, sherbet	1.0%
Grain products and pastas	Cereal/nutrition bars, all pasta and noodles (cooked)	3.8 g/serving (2.7 – 9.5%) [♭]
Gravies	Gravies, all types	3.0%
Isotonic beverages	Sports drinks and fluid replacement (i.e., Pedialyte)	1.0%
Juice drinks and punch	Fruit juice drinks and nectars, including powdered concentrates and ready-to-drink (RTD)	1.0%
Milk, dry, and powdered mixtures with dry milk, not reconstituted	Powdered milk, hot chocolate mix, strawberry beverage mix, chocolate beverage mix, malt mix, nutritional powder mix	1.5%

Food use type	Description of Foods Selected for Analysis	SFC Maximum Use Level in Finished Product ^a
Plant-based dairy alternatives	Milk substitutes including almond, coconut, rice milk; non-dairy frozen dessert; non-dairy yogurt; soy milk is captured in 'flavored and non-flavored soy milk' category	1.5%
Plant-based meat substitutes	Meatless frankfurters, bacon, chicken, luncheon slice, meatball, vegetarian burger	2.0%
Processed fruits and fruit juices	100% fruit juices, dried fruits, canned and frozen fruits	1.0%
Processed vegetables and vegetable juices	Vegetable juices; all canned, frozen, pickled, and dried vegetables. Excludes legumes.	1.0%
RTD and ready-to-make (RTM) coffee and tea	Coffees and teas, including bottled/canned, instant, or non-specified (NS)	1.5%
RTD meal replacements	Nutritional beverages, including milk-based and non-dairy	3.8 g/serving (1.6%) ^b
Ready-to-eat (RTE) cereals	All RTE cereals such as puffed rice, General Mills Cheerios, Quaker Cap'n Crunch, Kellogg's All-Bran, General Mills Fiber One, Post Shredded Wheat	3.8 g/serving (6.3 – 25.3%)♭
Salad dressings	Salad dressings, including mayonnaise	3.0%
Sauces	Pasta sauce, pizza sauce, cheese sauce, cream sauce, barbecue sauce, hollandaise sauce, tartar sauce, tomato chili sauce, mustard sauce, sweet and sour sauce, garlic sauce, lemon-butter sauce	3.0%
Smoothies and grain drinks	Smoothies and grain drinks, all types	3.8 g/serving (1.6%)⁵
Snack foods	Crackers, popcorn, pretzels/snacks mix, potato chips, tortilla chips, and other chips	3.8 g/serving (12.7%) ^₅
Soups	Soups including RTE, condensed, and dry soups	3.0%
Yogurt	Regular and Greek yogurt, all types and flavors	3.0%

Abbreviations: SFC soluble fiber corn; g gram; NS not specific; RTD ready-to-drink; RTE ready-to-eat; RTM ready-to-make ^a Use level corresponds to the finished product (i.e., food as consumed).

^b Based on a food serving which corresponds to the gram weight, cup weight, or milliliter (mL) volume as specified by the Reference Amounts Customarily Consumed (RACCs) as cited in FR Vol 81, No. 103, Friday, May 27, 2016, pp 34000-47. Available at: https://www.govinfo.gov/content/pkg/FR-2016-05-27/pdf/2016-11865.pdf. Serving size as a volume measure (e.g., cup, mL, tbsp) assumed that 1 mL=1g.

				Per	User	
		-		90 th		90 th
			Mean	Percentile	Mean	Percentile
Population	N^1	% User	(g/day	g/kg	j bw/day
U.S. 1+ y	13048	100	21.6	35.3	0.37	0.73
Children 1-5 y	1336	100	16.9	27.2	1.06	1.64
Children 6-12 y	1744	100	23.5	34.8	0.71	1.15
Adolescents 13-18 y	1433	100	23.0	35.9	0.36	0.62
Adults 19+ y	8535	100	21.6	35.7	0.27	0.45

Table 2. Per user 2-day average estimated daily intake (EDI) of SFC from all proposed food uses
among the U.S. population one year and older (1+ y) and subgroups

¹ Un-weighted number of users; % user and *per user* estimates were based on NHANES 2015-2018 and derived using the statistical weights provided by the NCHS.

		_	Per User			
		-		90 th		90 th
Population and proposed food			Mean	Percentile	Mean	Percentile
category	N^1	% User	ç	j/day	g/kg	bw/day
U.S. 1+ y						
Baked goods and baking mixes	12531	96	9.2	17.0	0.15	0.31
Beverages and beverage bases	1943	15	3.0	6.2	0.05	0.09
Cheese	10018	81	0.3	0.7	<0.005	0.01
Candies and confections	4364	35	0.2	0.5	<0.005	0.01
Coatings and Breadings for meat, poultry, and vegetables	4881	34	0.4	0.7	0.01	0.01
Custards, puddings, and gelatin desserts	647	5	2.2	4.5	0.04	0.08
Dairy products	4313	37	0.4	0.8	0.01	0.01
Dips	3602	30	1.2	2.7	0.02	0.04
Egg Products**	117	1	1.0	2.0	0.01	0.03
Filling, baked goods	2841	22	0.8	1.8	0.01	0.03
Flavored and non-flavored soy milk	244	2	1.9	3.7	0.04	0.06
Flavored milk and milk drinks	1363	8	2.9	5.2	0.07	0.15
Frozen dairy desserts	2905	23	0.8	1.6	0.01	0.03
Grain products and pastas	5033	42	2.7	5.4	0.05	0.10
Gravies	1154	9	1.3	2.8	0.02	0.04
Isotonic beverages	912	7	4.1	8.0	0.06	0.14
Juice drinks and punch	2473	15	2.0	3.9	0.04	0.08
Milk, dry, and powdered mixtures with dry milk, not reconstituted	789	7	2.7	5.4	0.05	0.10
Plant-based dairy alternatives	550	5	2.2	4.1	0.04	0.07
Plant-based meat substitutes**	120	1	0.9	1.8	0.01	0.03
Processed fruits and fruit juices	5455	38	1.7	3.6	0.04	0.08
Processed vegetables and vegetable juices	7829	59	0.7	1.5	0.01	0.02
RTD and RTM coffee and tea	2493	18	5.2	10.4	0.07	0.14
RTD meal replacements	230	2	4.2	7.9	0.06	0.10
RTE cereals	4508	33	3.0	5.7	0.06	0.12
Salad dressings	6112	53	0.6	1.2	0.01	0.02
Sauces	7575	59	1.5	3.3	0.03	0.06
Smoothies and grain drinks	794	6	4.1	7.6	0.06	0.12
Snack foods	7948	62	3.7	7.5	0.07	0.14
Soups	2942	21	5.6	12.1	0.09	0.20
Yogurt	1913	16	3.0	5.6	0.06	0.12

Table 3. *Per user* 2-day average estimated daily intake (EDI) of SFC by proposed food use among the U.S. population one year and older (1 + y) and subgroups

Estimated Daily Intake (EDI) of AgriFiber Soluble Fiber Corn (SFC) May 26, 2022 Page 9

			Per User			
		-		90 th		90 th
Population and proposed food		_	Mean	Percentile	Mean	Percentile
category	N^1	% User	g/day		g/kg bw/day	
Children 1-5 y						
Baked goods and baking mixes	1277	96	6.3	11.8	0.39	0.70
Beverages and beverage bases	220	17	1.6	3.6	0.10	0.23
Cheese	1017	77	0.2	0.4	0.01	0.03
Candies and confections	541	43	0.2	0.3	0.01	0.02
Coatings and Breadings for meat, poultry, and vegetables	578	44	0.2	0.5	0.01	0.03
Custards, puddings, and gelatin desserts*	66	6	1.5	3.6	0.09	0.18
Dairy products**	172	13	0.2	0.4	0.01	0.02
Dips	220	20	0.5	0.9	0.03	0.06
Egg Products*	6	0.4	0.4	0	0.03	NA
Filling, baked goods	312	24	0.4	0.8	0.02	0.04
Flavored and non-flavored soy milk*	30	2	3.1	8.2	0.24	0.72
Flavored milk and milk drinks	235	20	2.8	5.6	0.17	0.37
Frozen dairy desserts	270	21	0.5	1.0	0.03	0.06
Grain products and pastas	706	54	1.8	3.8	0.11	0.23
Gravies**	81	5	0.6	1.3	0.04	0.07
Isotonic beverages**	87	6	1.9	4.4	0.13	0.28
Juice drinks and punch	388	28	1.5	2.8	0.09	0.18
Milk, dry, and powdered mixtures with dry milk, not reconstituted**	96	9	2.5	5.2	0.16	0.38
Plant-based dairy alternatives*	53	4	2.6	5.3	0.20	0.49
Plant-based meat substitutes*	8	0.9	0.6	0	0.04	NA
Processed fruits and fruit juices	959	72	1.9	3.7	0.12	0.25
Processed vegetables and vegetable juices	878	64	0.5	0.9	0.03	0.06
RTD and RTM coffee and tea*	59	5	1.9	4.8	0.11	0.23
RTD meal replacements*	7	0.6	2.1	0	0.13	NA
RTE cereals	769	56	1.9	3.5	0.12	0.23
Salad dressings	359	28	0.2	0.5	0.01	0.03
Sauces	908	68	1.2	2.8	0.07	0.18
Smoothies and grain drinks*	73	5	1.7	4.0	0.12	0.27
Snack foods	1001	76	3.0	6.0	0.19	0.38
Soups	270	19	2.8	6.5	0.18	0.38
Yogurt	379	30	2.5	4.9	0.17	0.34

			Per User			
		-		90 th		90 th
Population and proposed food		_	Mean	Percentile	Mean	Percentile
category	N ¹	% User	g/day		g/kg bw/day	
Children 6-12 y						
Baked goods and baking mixes	1718	99	9.9	16.9	0.30	0.55
Beverages and beverage bases	406	23	1.9	3.6	0.06	0.11
Cheese	1469	87	0.3	0.5	0.01	0.02
Candies and confections	767	46	0.2	0.4	0.01	0.02
Coatings and Breadings for meat, poultry, and vegetables	767	43	0.3	0.6	0.01	0.02
Custards, puddings, and gelatin desserts**	95	6	2.0	3.6	0.06	0.12
Dairy products	289	18	0.2	0.4	0.01	0.02
Dips	507	28	0.9	2.0	0.03	0.05
Egg Products*	7	0.3	0.6	0	0.01	NA
Filling, baked goods	470	27	0.5	1.1	0.02	0.04
Flavored and non-flavored soy milk*	18	1	1.5	2.9	0.05	0.09
Flavored milk and milk drinks	579	32	2.6	4.3	0.08	0.16
Frozen dairy desserts	551	32	0.8	1.4	0.02	0.05
Grain products and pastas	777	49	2.4	4.4	0.07	0.14
Gravies**	112	8	1.2	2.6	0.03	0.07
Isotonic beverages**	176	11	2.6	4.9	0.08	0.14
Juice drinks and punch	568	29	1.7	3.4	0.05	0.11
Milk, dry, and powdered mixtures with dry milk, not reconstituted**	109	6	2.3	4.1	0.07	0.15
Plant-based dairy alternatives*	35	2	2.4	3.9	0.07	0.14
Plant-based meat substitutes*	9	0.5	0.7	0	0.03	NA
Processed fruits and fruit juices	978	55	1.6	3.1	0.05	0.10
Processed vegetables and vegetable juices	1046	57	0.5	1.2	0.02	0.03
RTD and RTM coffee and tea**	166	9	2.8	5.8	0.08	0.14
RTD meal replacements*	11	0.6	2.6	4.9	0.06	0.08
RTE cereals	980	55	2.9	5.6	0.09	0.17
Salad dressings	679	40	0.4	0.9	0.01	0.03
Sauces	1223	70	1.4	3.2	0.04	0.10
Smoothies and grain drinks**	88	5	2.7	4.6	0.08	0.14
Snack foods	1323	75	4.3	9.3	0.13	0.27
Soups	372	19	5.0	9.2	0.15	0.29
Yogurt	309	21	2.3	4.5	0.08	0.16

			Per User			
		-		90 th		90 th
Population and proposed food		_	Mean	Percentile	Mean	Percentile
category	N^1	% User	g/day		g/kg bw/day	
Adolescents 13-18 y						
Baked goods and baking mixes	1400	98	10.4	18.7	0.16	0.29
Beverages and beverage bases	235	18	2.3	4.4	0.04	0.07
Cheese	1199	85	0.3	0.7	<0.005	0.01
Candies and confections	480	34	0.2	0.6	<0.005	0.01
Coatings and Breadings for meat, poultry, and vegetables	568	37	0.4	0.8	0.01	0.01
Custards, puddings, and gelatin desserts*	38	2	2.1	5.9	0.03	0.07
Dairy products	284	22	0.3	0.7	0.01	0.01
Dips	413	27	1.0	2.1	0.02	0.03
Egg Products*	7	0.2	2.2	0	0.03	NA
Filling, baked goods	296	19	0.7	1.5	0.01	0.03
Flavored and non-flavored soy milk*	19	2	2.6	3.7	0.04	0.06
Flavored milk and milk drinks	224	16	2.9	5.6	0.05	0.09
Frozen dairy desserts	336	25	0.9	1.7	0.01	0.03
Grain products and pastas	548	41	2.9	5.7	0.05	0.09
Gravies**	96	7	1.2	3.1	0.02	0.04
Isotonic beverages**	172	12	3.4	6.2	0.05	0.08
Juice drinks and punch	320	20	2.1	3.7	0.03	0.06
Milk, dry, and powdered mixtures with dry milk, not reconstituted**	78	6	2.3	4.5	0.04	0.06
Plant-based dairy alternatives*	36	4	2.5	3.8	0.04	0.06
Plant-based meat substitutes*	8	0.6	1.3	0	0.02	NA
Processed fruits and fruit juices	553	36	1.9	4.1	0.03	0.06
Processed vegetables and vegetable juices	751	52	0.7	1.3	0.01	0.02
RTD and RTM coffee and tea**	191	15	4.2	7.8	0.06	0.11
RTD meal replacements*	16	1	5.9	17.0	0.11	0.28
RTE cereals	587	43	3.5	6.5	0.05	0.11
Salad dressings	589	44	0.5	1.2	0.01	0.02
Sauces	904	64	1.6	3.7	0.03	0.06
Smoothies and grain drinks*	63	4	3.5	7.6	0.06	0.18
Snack foods	926	65	3.9	7.9	0.06	0.12
Soups	280	18	5.2	11.4	0.09	0.17
Yogurt**	112	7	2.9	5.9	0.05	0.10

			Per User			
		-		90 th		90 th
Population and proposed food		-	Mean	Percentile	Mean	Percentile
category	N ¹	% User	g/day		g/kg bw/day	
Adults 19+ y						
Baked goods and baking mixes	8136	96	9.2	17.2	0.11	0.22
Beverages and beverage bases	1082	13	3.5	7.4	0.04	0.08
Cheese	6333	80	0.3	0.7	<0.005	0.01
Candies and confections	2576	33	0.2	0.5	<0.005	0.01
Coatings and Breadings for meat, poultry, and vegetables	2968	32	0.4	0.7	<0.005	0.01
Custards, puddings, and gelatin desserts	448	5	2.3	4.7	0.03	0.06
Dairy products	3568	43	0.4	0.8	0.01	0.01
Dips	2462	32	1.3	2.8	0.02	0.04
Egg Products**	97	1	1.0	2.0	0.01	0.02
Filling, baked goods	1763	21	0.8	1.9	0.01	0.02
Flavored and non-flavored soy milk**	177	2	1.7	3.4	0.02	0.05
Flavored milk and milk drinks	325	4	3.2	5.3	0.04	0.07
Frozen dairy desserts	1748	22	0.8	1.7	0.01	0.02
Grain products and pastas	3002	40	2.9	5.8	0.04	0.08
Gravies	865	10	1.3	2.9	0.02	0.03
Isotonic beverages	477	6	4.7	9.9	0.06	0.13
Juice drinks and punch	1197	12	2.2	4.5	0.03	0.05
Milk, dry, and powdered mixtures with dry milk, not reconstituted	506	7	2.8	5.6	0.04	0.07
Plant-based dairy alternatives	426	6	2.1	4.1	0.03	0.06
Plant-based meat substitutes**	95	1	0.9	1.8	0.01	0.02
Processed fruits and fruit juices	2965	33	1.7	3.7	0.02	0.05
Processed vegetables and vegetable juices	5154	60	0.7	1.6	0.01	0.02
RTD and RTM coffee and tea	2077	20	5.4	11.0	0.07	0.14
RTD meal replacements**	196	3	4.3	7.9	0.06	0.09
RTE cereals	2172	28	3.2	5.8	0.04	0.07
Salad dressings	4485	57	0.6	1.3	0.01	0.02
Sauces	4540	57	1.6	3.4	0.02	0.04
Smoothies and grain drinks	570	6	4.5	7.6	0.06	0.11
Snack foods	4698	59	3.7	7.4	0.05	0.09
Soups	2020	21	5.9	12.6	0.08	0.17
Yogurt	1113	15	3.2	5.9	0.04	0.08

Abbreviations: RTD ready-to-drink; RTE ready-to-eat; RTM ready-to-make

¹ Un-weighted number of users; % user and *per user* estimates were based on NHANES 2015-2018 and derived using the statistical weights provided by the NCHS.

* The per user estimates at the mean and 90th percentile may not be statistically reliable due to an inadequate number of users.

** The *per user* estimates at the 90th percentile may not be statistically reliable due to an inadequate number of users.

NA = Not available; estimate not reported when the unweighted number of users ≤ 10 .

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Appendix A: WWEIA, NHANES 2015-2018 Food Codes Included in Analysis of SFC EDIs

Food	Food description					
code						
Baked good	Baked goods and baking mixes					
13120550	Ice cream cookie sandwich*					
13252590	Trifle*					
13252600	Tiramisu*					
14640000	Cheese sandwich, NFS*					
14640002	Cheese sandwich, American cheese, on white bread, no spread*					
14640004	Cheese sandwich, American cheese, on wheat bread, no spread*					
14640006	Cheese sandwich, American cheese, on whole wheat bread, no spread*					
14640008	Cheese sandwich, Cheddar cheese, on white bread, no spread*					
14640010	Cheese sandwich, Cheddar cheese, on wheat bread, no spread*					
14640012	Cheese sandwich, Cheddar cheese, on whole wheat bread, no spread*					
14640014	Cheese sandwich, reduced fat American cheese, on white bread, no spread*					
14640018	Cheese sandwich, reduced fat American cheese, on whole wheat bread, no spread*					
14640020	Cheese sandwich, reduced fat Cheddar cheese, on white bread, no spread*					
14640024	Cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread, no spread*					
14640026	Cheese sandwich, American cheese, on white bread, with mayonnaise*					
14640028	Cheese sandwich, American cheese, on wheat bread, with mayonnaise*					
14640030	Cheese sandwich, American cheese, on whole wheat bread, with mayonnaise*					
14640032	Cheese sandwich, Cheddar cheese, on white bread, with mayonnaise*					
14640034	Cheese sandwich, Cheddar cheese, on wheat bread, with mayonnaise*					
14640036	Cheese sandwich, Cheddar cheese, on whole wheat bread, with mayonnaise*					
14640042	Cheese sandwich, reduced fat American cheese, on whole wheat bread, with mayonnaise*					
14640046	Cheese sandwich, reduced fat Cheddar cheese, on wheat bread, with mayonnaise*					
14640048	Cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread, with mayonnaise*					
14640050	Cheese sandwich, American cheese, on white bread, with butter*					
14640052	Cheese sandwich, American cheese, on wheat bread, with butter*					
14640054	Cheese sandwich, American cheese, on whole wheat bread, with butter*					
14640056	Cheese sandwich, Cheddar cheese, on white bread, with butter*					
14640058	Cheese sandwich, Cheddar cheese, on wheat bread, with butter*					
14640060	Cheese sandwich, Cheddar cheese, on whole wheat bread, with butter*					
14640062	Cheese sandwich, reduced fat American cheese, on white bread, with butter*					
14640068	Cheese sandwich, reduced fat Cheddar cheese, on white bread, with butter*					
14640100	Grilled cheese sandwich, NFS*					
14640105	Grilled cheese sandwich, American cheese, on white bread*					
14640110	Grilled cheese sandwich, American cheese, on wheat bread*					
14640115	Grilled cheese sandwich, American cheese, on whole wheat bread*					
14640125	Grilled cheese sandwich, Cheddar cheese, on white bread*					
14640130	Grilled cheese sandwich, Cheddar cheese, on wheat bread*					
14640135	Grilled cheese sandwich, Cheddar cheese, on whole wheat bread*					
14640155	Grilled cheese sandwich, reduced fat American cheese, on white bread*					
14640160	Grilled cheese sandwich, reduced fat American cheese, on wheat bread*					
14640165	Grilled cheese sandwich, reduced fat American cheese, on whole wheat bread*					
14640185	Grilled cheese sandwich, reduced fat Cheddar cheese, on white bread*					
14640190	Grilled cheese sandwich, reduced fat Cheddar cheese, on wheat bread*					
14640195	Grilled cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread*					
27214100	Meat loaf made with beef*					
27214110	Meat loaf made with beef, with tomato-based sauce*					

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Estimated Daily Intake (EDI) of AgriFiber Soluble Fiber Corn (SFC) May 26, 2022 Page 15

Food	Food description
code	Maat laaf mada with vaniaan/daar*
27235000	Meat loaf made with venison/deer*
27246500	Meat loaf made with chicken or turkey* Meat loaf made with chicken or turkey, with tomato-based sauce*
27246505	
27250080	Salmon loaf*
27260010	Meat loaf, NS as to type of meat*
27260050	Meatballs, with breading, NS as to type of meat, with gravy*
27260080 27260100	Meat loaf made with beef and pork* Meat loaf made with beef and pork, with tomato-based sauce*
27260510	Liver dumpling*
27200510	Sandwich, NFS*
27500050	Meat sandwich, NFS*
27500100	Wrap sandwich, NFS*
27510000	Beef sandwich, NFS*
27510000	Cheeseburger slider, from fast food*
27510140	Cheeseburger, 1 miniature patty, with condiments, on miniature bun, from fast food / restaurant*
27510143	Cheeseburger, 1 miniature patty, on miniature bun, from school*
27510150	Cheeseburger, NFS*
27510155	Cheeseburger, from fast food, 1 small patty*
27510100	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510100	Cheeseburger (Burger King)*
27510170	Whopper Jr with cheese (Burger King)*
27510172	Cheeseburger (McDonalds)*
27510172	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Kid's
	Cheeseburger)*
27510174	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr. Cheeseburger)*
27510175	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr.
27010170	Cheeseburger Deluxe)*
27510190	Cheeseburger, from school cafeteria*
27510191	Cheeseburger slider*
27510195	Cheeseburger, on white bun, 1 small patty*
27510196	Cheeseburger, on wheat bun, 1 small patty*
27510205	Cheeseburger, 1 small patty, with condiments, on white bun*
27510206	Cheeseburger, 1 small patty, with condiments, on wheat bun*
27510207	Cheeseburger, 1 small patty, with condiments, on whole wheat bun*
27510215	Cheeseburger, from fast food, 1 medium patty*
27510225	Cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510229	Quarter Pounder (McDonalds)*
27510231	Whopper with cheese (Burger King)*
27510232	Quarter Pounder with cheese (McDonalds)*
27510233	Cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant (Wendy's 1/4 lb
	Single with cheese)*
27510235	Cheeseburger submarine sandwich with lettuce, tomato and spread*
27510241	Cheeseburger, on white bun, 1 medium patty*
27510242	Cheeseburger, on wheat bun, 1 medium patty*
27510243	Cheeseburger, 1 medium patty, plain, on whole wheat bun*

Estimated Daily Intake (EDI) of AgriFiber Soluble Fiber Corn (SFC) May 26, 2022 Page 16

Food	Food description
code	1000 description
27510245	Cheeseburger, on white bun, 1 large patty*
27510246	Cheeseburger, on wheat bun, 1 large patty*
27510251	Cheeseburger, 1 medium patty, with condiments, on white bun*
27510252	Cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510253	Cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510254	Double cheeseburger, on white bun, 2 small patties*
27510257	Double cheeseburger, on white bun, 2 medium patties*
27510258	Double cheeseburger, on wheat bun, 2 medium patties*
27510261	Cheeseburger, from fast food, 1 large patty*
27510262	Double cheeseburger, on white bun, 2 large patties*
27510266	Cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510276	Bacon cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510281	Bacon cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr. Bacon Cheeseburger)*
27510305	Bacon cheeseburger, 1 medium patty, plain, on bun, from fast food / restaurant*
27510312	Bacon cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510331	Bacon cheeseburger, 1 medium patty, plain, on white bun*
27510341	Bacon cheeseburger, 1 medium patty, with condiments, on white bun*
27510342	Bacon cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510343	Bacon cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510346	Bacon cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510371	Double cheeseburger, from fast food, 2 small patties*
27510376	Double cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant*
27510386	Double cheeseburger (Burger King)*
27510387 27510388	Double cheeseburger (McDonalds)* McDouble (McDonalds)*
27510388	Big Mac (McDonalds)*
27510307	Double cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant (Wendy's
27510571	Double Stack)*
27510401	Double cheeseburger, from fast food, 2 medium patties*
27510405	Double cheeseburger, from fast food, 2 large patties*
27510406	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510412	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (McDonald's Double Quarter Pounder with Cheese)*
27510413	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Wendy's 1/2 lb Double with cheese)*
27510431	Double bacon cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant (Burger King Bacon Double Cheeseburger)*
27510446	Double bacon cheeseburger, 2 medium patties, plain, on bun, from fast food / restaurant*
27510451	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510465	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Wendy's Baconator)*
27510475	Double bacon cheeseburger, 2 large patties, with condiments, on bun, from fast food / restaurant*
27510486	Triple cheeseburger, 3 medium patties, with condiments, on bun, from fast food / restaurant*
27510501	Hamburger slider, from fast food*
2751050/	Lamburger 1 ministure netty with condimente on ministure hun from fact food (restaurant*

27510506 Hamburger, 1 miniature patty, with condiments, on miniature bun, from fast food / restaurant*

Food	Food description
cod e 27510511	Hamburger 1 miniature natty on miniature bun, from school*
27510511	Hamburger, 1 miniature patty, on miniature bun, from school*
	Hamburger, from fast food, 1 small patty* Hamburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510536	
27510551	Hamburger (Burger King)*
27510552	Whopper Jr (Burger King)*
27510553	Hamburger (McDonalds)*
27510555	Hamburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr. Hamburger)*
27510565	Hamburger, from school cafeteria*
27510573	Hamburger slider*
27510575	Hamburger, on white bun, 1 small patty*
27510576	Hamburger, on wheat bun, 1 small patty*
27510577	Hamburger, 1 small patty, plain, on whole wheat bun*
27510585	Hamburger, 1 small patty, with condiments, on white bun*
27510587	Hamburger, 1 small patty, with condiments, on whole wheat bun*
27510601	Hamburger, from fast food, 1 medium patty*
27510605	Hamburger, from fast food, 1 large patty*
27510606	Hamburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510615	Whopper (Burger King)*
27510616	Hamburger, 1 medium patty, with condiments, on bun, from fast food / restaurant (Wendy's 1/4 lb
	Single)*
27510631	Hamburger, on white bun, 1 medium patty*
27510632	Hamburger, on wheat bun, 1 medium patty*
27510633	Hamburger, 1 medium patty, plain, on whole wheat bun*
27510635	Hamburger, on white bun, 1 large patty*
27510636	Hamburger, on wheat bun, 1 large patty*
27510641	Hamburger, 1 medium patty, with condiments, on white bun*
27510642	Hamburger, 1 medium patty, with condiments, on wheat bun*
27510643	Hamburger, 1 medium patty, with condiments, on whole wheat bun*
27510649	Double hamburger, on white bun, 2 small patties*
27510655	Double hamburger, on white bun, 2 medium patties*
27510657	Double hamburger, on wheat bun, 2 medium patties*
27510658	Double hamburger, on white bun, 2 large patties*
27510661	Double hamburger, from fast food, 2 small patties*
27510667	Double hamburger, 2 small patties, with condiments, on bun, from fast food / restaurant*
27510671	Double hamburger, from fast food, 2 medium patties*
27510675	Double hamburger, from fast food, 2 large patties*
27510676	Double hamburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510681	Double hamburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Burger King Double WHOPPER)*
27510682	Double hamburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Wendy's 1/2 lb Double)*
27510700	Meatball and spaghetti sauce submarine sandwich*
27510705	Chiliburger, with or without cheese, on bun*
27510910	Corned beef sandwich*
27510950	Reuben sandwich, corned beef sandwich with sauerkraut and cheese, with spread*

Food	Food description
code	
27513010	Roast beef sandwich*
27513040	Roast beef submarine sandwich, with lettuce, tomato and spread*
27513041	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread*
27513050	Roast beef sandwich with cheese*
27515010	Steak sandwich, plain, on roll*
27515020	Steak and cheese submarine sandwich, with lettuce and tomato*
27515030	Steak and cheese sandwich, plain, on roll*
27515040	Steak and cheese submarine sandwich, plain, on roll*
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll*
27515080	Steak sandwich, plain, on biscuit*
27516010	Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread*
27517000	Hamburger wrap sandwich, from fast food*
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread*
27520140	Bacon and egg sandwich*
27520150	Bacon, lettuce, and tomato sandwich with spread*
27520155	Bacon, lettuce, and tomato submarine sandwich, with spread*
27520156	Bacon, lettuce, tomato, and cheese submarine sandwich, with spread*
27520160 27520166	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread* Bacon, breaded fried chicken fillet, and tomato club sandwich with cheese, lettuce and spread*
27520100	Bacon on biscuit*
27520170	Ham on biscuit*
27520250	Ham sandwich with lettuce and spread*
27520310	Ham and cheese sandwich, with lettuce and spread*
27520320	Ham and cheese sandwich, with relace and spread Ham and cheese sandwich, with spread, grilled*
27520330	Hot ham and cheese sandwich, with spread, grined
27520370	Ham and cheese submarine sandwich, with lettuce, tomato and spread*
27520370	Cuban sandwich, with spread*
27520410	Pork sandwich, on white roll, with onions, dill pickles and barbecue sauce*
27520500	Pork barbecue sandwich or Sloppy Joe, on bun*
27520520	Pork sandwich*
27540110	Sliced chicken sandwich, with spread*
27540111	Sliced chicken sandwich, with cheese and spread*
27540120	Chicken salad or chicken spread sandwich*
27540132	Chicken fillet sandwich, NFS*
27540139	Chicken fillet sandwich, from school cafeteria*
27540140	Chicken fillet, breaded, fried, sandwich*
27540145	Chicken fillet biscuit, from fast food*
27540146	Chicken fillet sandwich, fried, from fast food*
27540147	Chicken fillet sandwich, fried, from fast food, with cheese*
27540150	Chicken fillet, breaded, fried, sandwich with lettuce, tomato and spread*
27540151	Chicken fillet, breaded, fried, sandwich with cheese, lettuce, tomato and spread*
27540152	Chicken fillet sandwich, grilled, from fast food*
27540153	Chicken fillet sandwich, grilled, from fast food, with cheese*
27540160	Chicken fillet sandwich, NS as to fried or grilled, from fast food*
27540170	Chicken patty sandwich, miniature, with spread*
27540175	Chicken fillet sandwich, fried, on white bun*

Food code	Food description
27540176	Chicken fillet sandwich, fried, on white bun; with cheese*
27540180	Chicken patty sandwich or biscuit*
27540185	Chicken fillet sandwich, fried, on wheat bun*
27540186	Chicken fillet sandwich, fried, on wheat bun, with cheese*
27540190	Chicken patty sandwich, with lettuce and spread*
27540195	Chicken fillet sandwich, grilled, on white bun*
27540196	Chicken fillet sandwich, grilled, on white bun, with cheese*
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato*
27540205	Chicken fillet sandwich, grilled, on wheat bun*
27540206	Chicken fillet sandwich, grilled, on wheat bun, with cheese*
27540210	Chicken fillet wrap sandwich, fried, from fast food*
27540235	Chicken fillet, broiled, sandwich with lettuce, tomato, and spread*
27540240	Chicken fillet, broiled, sandwich, on whole wheat roll, with lettuce, tomato and spread *
27540250	Chicken fillet, broiled, sandwich with cheese, on whole wheat roll, with lettuce, tomato and non-
	mayonnaise type spread*
27540280	Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread*
27540285	Chicken, bacon, and tomato club sandwich, with lettuce and spread*
27540290	Chicken submarine sandwich, with lettuce, tomato and spread*
27540291	Chicken submarine sandwich, with cheese, lettuce, tomato and spread*
27540295	Buffalo chicken submarine sandwich*
27540296	Buffalo chicken submarine sandwich with cheese*
27540300	Chicken fillet wrap sandwich, grilled, from fast food*
27540310	Turkey sandwich, with spread*
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread*
27540360 27540361	Turkey and bacon submarine sandwich, with lettuce, tomato and spread* Turkey and bacon submarine sandwich, with cheese, lettuce, tomato and spread*
27540301	Turkey, ham, and roast beef club sandwich, with lettuce, tomato and spread*
27541000	Turkey, ham, and roast beef club sandwich, with cheese, lettuce, tomato and spread*
27545000	Turkey or chicken burger, plain, on bun, from fast food / restaurant*
27545010	Turkey or chicken burger, with condiments, on bun, from fast food / restaurant*
27545100	Turkey or chicken burger, on white bun*
27545110	Turkey or chicken burger, on wheat bun*
27545200	Turkey or chicken burger, with condiments, on white bun*
27545210	Turkey or chicken burger, with condiments, on wheat bun*
27545220	Turkey or chicken burger, with condiments, on whole wheat bun*
27550000	Fish sandwich, fried, from fast food*
27550100	Fish sandwich, fried, from fast food, with cheese*
27550110	Crab cake sandwich*
27550120	Salmon cake sandwich*
27550150	Fried seafood sandwich*
27550200	Fish sandwich, from school cafeteria*
27550300	Fish sandwich, NFS*
27550400	Fish sandwich, fried, on white bun*
27550405	Fish sandwich, fried, on white bun, with cheese*
27550410	Fish sandwich, fried, on wheat bun*
27550420	Fish sandwich, grilled*

Food code	Food description
27550425	Fish wrap sandwich*
27550510	Sardine sandwich*
27550720	Tuna salad sandwich, on bread*
27550720	Tuna salad sandwich, on bread, with cheese*
27550740	Tuna salad sandwich, on bun*
27550745	Tuna salad sandwich, on bun, with cheese*
27550750	Tuna salad submarine sandwich, with lettuce and tomato*
27550751	Tuna salad submarine sandwich, with cheese, lettuce and tomato*
27550755	Tuna salad wrap sandwich*
27550800	Seafood salad sandwich*
27560120	Bologna and cheese sandwich, with spread*
27560350	Pig in a blanket, frankfurter or hot dog wrapped in dough*
27560500	Pepperoni and salami submarine sandwich, with lettuce, tomato and spread*
27560650	Sausage on biscuit*
27560660	Sausage griddle cake sandwich*
27560670	Sausage and cheese on English muffin*
27560705	Sausage balls, made with biscuit mix and cheese*
27560710	Sausage sandwich*
27560910	Cold cut sumarine sandwich, with cheese, lettuce, tomato and spread*
27564000	Frankfurter or hot dog sandwich, NFS, plain, on white bun*
27564001	Frankfurter or hot dog sandwich, NFS, plain, on wheat bun*
27564002	Frankfurter or hot dog sandwich, NFS, plain, on whole wheat bun*
27564010	Frankfurter or hot dog sandwich, NFS, plain, on white bread*
27564020	Frankfurter or hot dog sandwich, NFS, plain, on wheat bread*
27564030	Frankfurter or hot dog sandwich, NFS, plain, on whole wheat bread*
27564060	Frankfurter or hot dog sandwich, beef, plain, on white bun*
27564061	Frankfurter or hot dog sandwich, beef, plain, on wheat bun*
27564062	Frankfurter or hot dog sandwich, beef, plain, on whole wheat bun*
27564064	Frankfurter or hot dog sandwich, beef, plain, on multigrain bun*
27564070	Frankfurter or hot dog sandwich, beef, plain, on white bread*
27564080	Frankfurter or hot dog sandwich, beef, plain, on wheat bread*
27564090	Frankfurter or hot dog sandwich, beef, plain, on whole wheat bread*
27564100	Frankfurter or hot dog sandwich, beef, plain, on whole grain white bread*
27564110	Frankfurter or hot dog sandwich, beef, plain, on multigrain bread*
27564120 27564121	Frankfurter or hot dog sandwich, beef and pork, plain, on white bun* Frankfurter or hot dog sandwich, beef and pork, plain, on wheat bun*
27564121	Frankfurter or hot dog sandwich, beef and pork, plain, on whole wheat bun*
27564122	Frankfurter or hot dog sandwich, beef and pork, plain, on white bread*
27564140	Frankfurter or hot dog sandwich, beef and pork, plain, on wheat bread*
27564150	Frankfurter or hot dog sandwich, beef and pork, plain, on whole wheat bread*
27564180	Frankfurter or hot dog sandwich, meat and poultry, plain, on white bun*
27564182	Frankfurter or hot dog sandwich, meat and poultry, plain, on whole wheat bun*
27564190	Frankfurter or hot dog sandwich, meat and poultry, plain, on white bread*
27564200	Frankfurter or hot dog sandwich, meat and poultry, plain, on wheat bread*
27564210	Frankfurter or hot dog sandwich, meat and poultry, plain, on whole wheat bread*
27564220	Frankfurter or hot dog sandwich, meat and poultry, plain, on whole grain white bread*

Food	Food description
code	
27564240	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on white bun*
27564241	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on wheat bun*
27564243	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on whole grain white bun*
27564250	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on white bread*
27564260	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on wheat bread*
27564270	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on whole wheat bread*
27564290	Frankfurter or hot dog sandwich, chicken and/or turkey, plain, on multigrain bread*
27564300	Frankfurter or hot dog sandwich, reduced fat or light, plain, on white bun*
27564301	Frankfurter or hot dog sandwich, reduced fat or light, plain, on wheat bun*
27564330	Frankfurter or hot dog sandwich, reduced fat or light, plain, on whole wheat bread*
27564360 27564370	Frankfurter or hot dog sandwich, fat free, plain, on white bun* Frankfurter or hot dog sandwich, fat free, plain, on white bread*
27564370	Frankfurter or hot dog sandwich, fat free, plain, on wheat bread*
27564380	Frankfurter or hot dog sandwich, reduced sodium*
27564420	Frankfurter or hot dog sandwich, meatless, plain, on bun*
27564430	Frankfurter or hot dog sandwich, meatless, plain, on bread*
27564440	Frankfurter or hot dog sandwich, with chili, on white bun*
27564441	Frankfurter or hot dog sandwich, with chili, on wheat bun*
27564442	Frankfurter or hot dog sandwich, with chili, on whole wheat bun*
27564443	Frankfurter or hot dog sandwich, with chili, on whole grain white bun*
27564450	Frankfurter or hot dog sandwich, with chili, on white bread*
27564500	Frankfurter or hot dog sandwich, with meatless chili, on white bun*
27564510	Frankfurter or hot dog sandwich, with meatless chili, on white brand*
27564520	Frankfurter or hot dog sandwich, with meatless chili, on wheat bread*
28141050	Chicken patty parmigiana, breaded, with vegetable, diet frozen meal*
28145100	Turkey with gravy, dressing, vegetable and fruit, diet frozen meal*
32101500	Egg, Benedict*
32105180	Huevos rancheros*
32105190	Egg casserole with bread, cheese, milk and meat*
32202000	Egg, cheese, ham, and bacon on bun*
32202010	Egg, cheese, and ham on English muffin*
32202025	Egg, cheese and ham on bagel*
32202030	Egg, cheese, and sausage on English muffin*
32202034	Egg, cheese, and sausage on bun*
32202035	Egg, extra cheese, and extra sausage, on bun*
32202045	Egg, cheese, and steak on bagel*
32202050	Egg, cheese, and sausage on biscuit*
32202055	Egg, cheese, and sausage griddle cake sandwich*
32202060	Egg and sausage on biscuit*
32202070	Egg, cheese, and bacon on biscuit*
32202075	Egg, cheese, and bacon griddle cake sandwich*
32202080	Egg, cheese, and bacon on English muffin*
32202085	Egg, cheese and bacon on bagel*
32202090	Egg and bacon on biscuit*
32202110	Egg and ham on biscuit*
32202120	Egg, cheese and sausage on bagel*

Food	Food description
code	
32202130	Egg and steak on biscuit*
32202200	Egg and cheese on biscuit*
32204010	Scrambled egg sandwich*
42301015	Peanut butter sandwich, with regular peanut butter, on white bread*
42301020	Peanut butter sandwich, with regular peanut butter, on wheat bread*
42301025	Peanut butter sandwich, with regular peanut butter, on whole wheat bread*
42301115	Peanut butter sandwich, with reduced fat peanut butter, on white bread*
42301120	Peanut butter sandwich, with reduced fat peanut butter, on wheat bread*
42301125	Peanut butter sandwich, with reduced fat peanut butter, on whole wheat bread*
42302010	Peanut butter and jelly sandwich, NFS*
42302015	Peanut butter and jelly sandwich, with regular peanut butter, regular jelly, on white bread*
42302020	Peanut butter and jelly sandwich, with regular peanut butter, regular jelly, on wheat bread*
42302025	Peanut butter and jelly sandwich, with regular peanut butter, regular jelly, on whole wheat bread*
42302055	Peanut butter and jelly sandwich, with reduced fat peanut butter, regular jelly, on white bread*
42302060 42302065	Peanut butter and jelly sandwich, with reduced fat peanut butter, regular jelly, on wheat bread* Peanut butter and jelly sandwich, with reduced fat peanut butter, regular jelly, on whole wheat bread*
42302005	Peanut butter and jelly sandwich, with regular peanut butter, reduced sugar jelly, on white bread*
42302103	Peanut butter and jelly sandwich, with regular peanut butter, reduced sugar jelly, on wheat bread*
42302110	Peanut butter and jelly sandwich, with regular peanut butter, reduced sugar jelly, on whole wheat
42302113	bread*
42302155	Peanut butter and jelly sandwich, with reduced fat peanut butter, reduced sugar jelly, on white
	bread*
42302160	Peanut butter and jelly sandwich, with reduced fat peanut butter, reduced sugar jelly, on wheat bread*
42302165	Peanut butter and jelly sandwich, with reduced fat peanut butter, reduced sugar jelly, on whole wheat bread*
42303100	Peanut butter and jelly sandwich, frozen commercial product without crusts*
51000100	Bread, NS as to major flour
51000110	Bread, NS as to major flour, toasted
51000180	Bread, made from home recipe or purchased at a bakery, NS as to major flour
51000200	Roll, NS as to major flour
51000300	Roll, hard, NS as to major flour
51101000	Bread, white
51101010	Bread, white, toasted
51101050	Bread, white, made from home recipe or purchased at a bakery
51101060	Bread, white, made from home recipe or purchased at a bakery, toasted
51102010	Bread, white with whole wheat swirl
51105010	Bread, Cuban
51105040	Bread, Cuban, toasted
51106010	Bread, native, water, Puerto Rican style
51107010	Bread, French or Vienna
51107040	Bread, French or Vienna, toasted
51108010	Focaccia, Italian flatbread, plain
51108100	Naan, Indian flatbread
51109010	Bread, Italian, Grecian, Armenian Bread, Italian, Grecian, Armenian, teasted
51109040	Bread, Italian, Grecian, Armenian, toasted

Food	Food description
cod e 51109100	Bread, pita
51109100	Bread, pita with fruit
51109130	Bread, cheese
51111040	Bread, cheese, toasted
51113010	Bread, cinnamon
51113100	Bread, cinnamon, toasted
51115020	Bread, commeal and molasses, toasted
51119010	Bread, egg, Challah
51119040	Bread, egg, Challah, toasted
51121015	Garlic bread, NFS
51121025	Garlic bread, from fast food / restaurant
51121035	Garlic bread, from frozen
51121045	Garlic bread, with parmesan cheese, from fast food / restaurant*
51121055	Garlic bread, with parmesan cheese, from frozen*
51121065	Garlic bread, with melted cheese, from fast food / restaurant*
51121075	Garlic bread, with melted cheese, from frozen*
51121110	Bread, onion
51122000	Bread, reduced calorie and/or high fiber, white or NFS
51122100	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts
51122110	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts, toasted
51127010	Bread, potato
51127020	Bread, potato, toasted
51129010	Bread, raisin
51129020	Bread, raisin, toasted
51133010	Bread, sour dough
51133020	Bread, sour dough, toasted
51134000	Bread, sweet potato
51135000	Bread, vegetable
51136000	Bruschetta*
51140100	Bread, dough, fried
51150000	Roll, white, soft
51153000	Roll, white, hard
51154010	Roll, white, hot dog bun
51154100	Roll, white, hamburger bun
51154550	Roll, egg bread
51154600	Roll, cheese*
51155000 51156500	Roll, French or Vienna
51156500	Roll, garlic Poll, white, beagin, submarine
51157000 51158100	Roll, white, hoagie, submarine Roll, Mexican, bolillo
51159000	Roll, sour dough
51160000	Roll, sweet, no frosting
51160000	Roll, sweet, cinnamon bun, no frosting
51160100	Roll, sweet, cinnamon bun, frosted
51161000	Pan Dulce, with fruit, no frosting
51161020	Roll, sweet, with fruit, frosted
01101020	

Food	Food description
code	Dell sweet fracted
51161050	Roll, sweet, frosted
51161250	Pan Dulce, no topping
51161270	Pan Dulce, with sugar topping
51161280	Pan Dulce, with raisins and icing
51165000	Coffee cake, yeast type
51166000	Croissant
51166100	Croissant, cheese
51166200	Croissant, chocolate
51166500	Croissant, fruit
51167000	Brioche
51180010	Bagel
51180030	Bagel, with raisins
51180080	Bagel, with fruit other than raisins
51182010	Bread stuffing
51182020 51183990	Bread stuffing made with egg Breadsticks, NFS
51183990	Breadsticks, NFS Breadsticks, soft, NFS
51184210	Breadsticks, soft, from fast food / restaurant
51184220	Breadsticks, soft, from frozen
51184230	Breadsticks, soft, with parmesan cheese, from fast food / restaurant*
51184240	Breadsticks, soft, with parmesan cheese, from frozen*
51184250	Breadsticks, soft, topped with melted cheese*
51184260	Breadsticks, soft, stuffed with melted cheese*
51185000	Croutons
51186010	Muffin, English
51186100	Muffin, English, with raisins
51186160	Muffin, English, with fruit other than raisins
51187020	Anisette toast
51188100	Pannetone
51300050	Bread, whole grain white
51300060	Bread, whole grain white, toasted
51300100	Bagel, whole grain white
51300110	Bread, whole wheat
51300120	Bread, whole wheat, toasted
51300140	Bread, whole wheat, made from home recipe or purchased at bakery
51300150	Bread, whole wheat, made from home recipe or purchased at bakery, toasted
51300175	Bread, chappatti or roti, wheat
51300180	Bread, puri, wheat
51300185	Bread, paratha, wheat
51300210	Bread, whole wheat, with raisins
51300220	Bread, whole wheat, with raisins, toasted
51300300	Bread, sprouted wheat
51300310	Bread, sprouted wheat, toasted
51301010	Bread, wheat or cracked wheat
51301020	Bread, wheat or cracked wheat, toasted
51301040	Bread, wheat or cracked wheat, made from home recipe or purchased at bakery

Food	Food description
code	Decedent structure and structure to the second structure and the second structure to second
51301050	Bread, wheat or cracked wheat, made from home recipe or purchased at bakery, toasted
51301120	Bread, wheat or cracked wheat, with raisins
51301130	Bread, wheat or cracked wheat, with raisins, toasted
51301510	Bread, wheat or cracked wheat, reduced calorie and/or high fiber
51301540	Bread, French or Vienna, whole wheat
51301550	Bread, French or Vienna, whole wheat, toasted
51301600	Bread, pita, whole wheat
51301620	Bread, pita, wheat or cracked wheat
51301700	Bagel, wheat
51301750 51301800	Bagel, whole wheat Bagel, wheat, with raisins
51301800	Bagel, whole wheat, with raisins
51301805	Bagel, wheat, with fruit and nuts
51301820	Muffin, English, wheat bran
51302500	Muffin, English, wheat or cracked wheat
51303010	Muffin, English, whole wheat
51303050	Muffin, English, wheat or cracked wheat, with raisins
51303050	Muffin, English, whole wheat, with raisins
51303070	Muffin, English, whole grain white
51303100	Roll, wheat or cracked wheat
51320010	Roll, wheat or cracked wheat, hot dog bun
51320000	Roll, wheat or cracked wheat, hamburger bun
51320500	Roll, whole wheat
51320550	Roll, whole wheat Roll, whole wheat Roll, whole wheat Roll and Rol
51320550	Roll, whole wheat, hor dog built Roll, whole wheat, hamburger bun
51320300	Roll, whole grain white
51320700	Roll, whole grain white, hot dog bun
51320710	Roll, whole grain white, harburger bun
51401010	Bread, rye
51401020	Bread, rye, toasted
51401030	Bread, marble rye and pumpernickel
51404010	Bread, pumpernickel
51404020	Bread, pumpernickel, toasted
51404500	Bagel, pumpernickel
51404550	Muffin, English, pumpernickel
51407010	Bread, black
51420000	Roll, rye
51421000	Roll, pumpernickel
51501010	Bread, oatmeal
51501020	Bread, oatmeal, toasted
51501040	Bread, oat bran
51501050	Bread, oat bran, toasted
51501080	Bagel, oat bran
51502010	Roll, oatmeal
51601010	Bread, multigrain, toasted
51601020	Bread, multigrain

Food	Food description
code	
51601210	Bread, multigrain, with raisins
51602020	Bread, multigrain, reduced calorie and/or high fiber, toasted
51620000	Roll, multigrain
51620030	Roll, multigrain, hamburger bun
51630000	Bagel, multigrain
51630100	Bagel, multigrain, with raisins
51630200	Muffin, English, multigrain
51801010	Bread, barley
51801020	Bread, barley, toasted
51805010	Bread, sunflower meal
51806010	Bread, rice
51807000	Injera, Ethiopian bread
51808000	Bread, gluten free
51808010	Bread, gluten free, toasted
51808100	Roll, gluten free
52101000	Biscuit, NFS
52101030	Biscuit dough, fried
52101100	Biscuit, baking powder or buttermilk type, made from mix
52102040	Biscuit, from refrigerated dough
52103000	Biscuit, from fast food / restaurant
52104010	Biscuit, home recipe
52104040	Biscuit, wheat
52104100	Biscuit, cheese*
52104200	Biscuit with fruit
52105100	Scone
52105200	Scone, with fruit
52201000	Cornbread, prepared from mix
52202060	Cornbread, made from home recipe
52204000	Cornbread stuffing
52206010	Cornbread muffin, stick, round
52206060	Cornbread muffin, stick, round, made from home recipe
52208010	Corn pone, baked
52208020	Corn pone, fried
52208760	Gordita/sope shell, plain, no filling
52209010	Hush puppy
52215000	Tortilla, NFS
52215100	Tortilla, corn
52215200	Tortilla, flour
52215260	Tortilla, whole wheat
52215300	Taco shell, corn
52215350	Taco shell, flour
52220110	Arepa Dominicana
52301000	Muffin, NFS
52302010	Muffin, fruit
52302020	Muffin, fruit, low fat
52302500	Muffin, chocolate chip

Food	Food description
code 52302600	Muffin chocolato
52302000	Muffin, chocolate Muffin, whole wheat
52303010	Muffin, wheat
52303500	Muffin, whole grain
52304000	Muffin, wheat bran
52304010	Muffin, bran with fruit, lowfat
52304040	Muffin, oatmeal
52304100	Muffin, oat bran
52306010	Muffin, plain
52306500	Muffin, pumpkin
52306550	Muffin, zucchini
52306700	Muffin, carrot
52311010	Popover
52401000	Bread, Boston Brown
52403000	Bread, nut
52404060	Bread, pumpkin
52405010	Bread, fruit
52407000	Bread, zucchini
52408000	Bread, Irish soda
53100100	Cake or cupcake, NS as to type*
53101100	Cake, angel food, without icing or filling
53101200	Cake, angel food, with icing or filling*
53101250	Cake, angel food, with fruit and icing or filling*
53102100	Cake or cupcake, applesauce, without icing or filling
53102200	Cake or cupcake, applesauce, with icing or filling*
53102600	Cake or cupcake, banana, without icing or filling
53102700	Cake or cupcake, banana, with icing or filling*
53102800	Cake or cupcake, Black Forest
53103000	Cake, Boston cream pie
53104100	Cake or cupcake, carrot, without icing or filling
53104260	Cake or cupcake, carrot, with icing or filling*
53104400	Cake or cupcake, coconut, with icing or filling*
53104500	Cheesecake*
53104550	Cheesecake with fruit*
53104600	Cheesecake, chocolate*
53105270	Cake or cupcake, chocolate, devil's food or fudge, with icing or filling*
53105275	Cake or cupcake, chocolate, devil's food or fudge, without icing or filling
53105300	Cake or cupcake, German chocolate, with icing or filling*
53106500	Cake, cream, without icing or topping
53108200	Snack cake, chocolate, with icing or filling*
53109200	Snack cake, not chocolate, with icing or filling*
53109220	Snack cake, not chocolate, with icing or filling, reduced fat and calories*
53110000	Cake, fruit cake, light or dark, holiday type cake
53111000 53112000	Cake or cupcake, gingerbread* Cake, ice cream and cake roll, chocolate*
53112000	Ice cream cake*
55112100	ונד נודמווו נמאל

Food	Food description
code	
53114000	Cake or cupcake, lemon, without icing or filling
53114100	Cake or cupcake, lemon, with icing or filling*
53115100	Cake or cupcake, marble, without icing or filling
53115200	Cake or cupcake, marble, with icing or filling*
53115310	Cake or cupcake, nut, without icing or filling
53115320	Cake or cupcake, nut, with icing or filling*
53115410	Cake or cupcake, oatmeal*
53115450	Cake or cupcake, peanut butter*
53116000	Cake, pound, without icing or filling
53116020	Cake, pound, with icing or filling*
53116270	Cake, pound, chocolate*
53116500	Cake or cupcake, pumpkin, without icing or filling
53116510	Cake or cupcake, pumpkin, with icing or filling*
53116570	Cake, Ravani
53116600	Cake, rice flour, without icing or filling
53116650	Cake, Quezadilla, El Salvadorian style
53117100	Cake or cupcake, spice, without icing or filling
53117200	Cake or cupcake, spice, with icing or filling*
53118100	Cake, sponge, without icing or filling
53118200	Cake, sponge, with icing or filling*
53118300	Cake, sponge, chocolate*
53118410	Rum cake, without icing
53118500	Cake, torte
53118550	Cake, tres leche
53119000	Cake, pineapple, upside down
53120270	Cake or cupcake, white, with icing or filling*
53120275	Cake or cupcake, white, without icing or filling
53121270	Cake or cupcake, yellow, with icing or filling*
53121275	Cake or cupcake, yellow, without icing or filling
53122070	Cake, shortcake, biscuit type, with whipped cream and fruit*
53122080	Cake, shortcake, biscuit type, with fruit
53123070	Cake, shortcake, sponge type, with whipped cream and fruit*
53123080	Cake, shortcake, sponge type, with fruit
53124110	Cake or cupcake, zucchini*
53200100	Cookie, batter or dough, raw
53201000	Cookie, NFS
53202000	Cookie, almond
53203000	Cookie, applesauce
53203500	Cookie, biscotti
53204000	Cookie, brownie, NS as to icing
53204010	Cookie, brownie, without icing
53204100	Cookie, brownie, with icing or filling*
53204840	Cookie, brownie, reduced fat, NS as to icing
53204860	Cookie, brownie, fat free, NS as to icing
53205250	Cookie, butterscotch, brownie
53205260	Cookie, bar, with chocolate

Food	Food description
code	
53206000	Cookie, chocolate chip
53206020	Cookie, chocolate chip, made from home recipe or purchased at a bakery
53206030	Cookie, chocolate chip, reduced fat
53206100	Cookie, chocolate chip sandwich*
53206500	Cookie, chocolate, made with rice cereal
53206550	Cookie, chocolate, made with oatmeal and coconut, no bake
53207000	Cookie, chocolate or fudge
53207020	Cookie, chocolate or fudge, reduced fat
53207050	Cookie, chocolate, with chocolate filling or coating, fat free*
53208000	Cookie, marshmallow, chocolate-covered
53208200	Cookie, marshmallow pie, chocolate covered
53209005	Cookie, chocolate, with icing or coating
53209010	Cookie, sugar wafer, chocolate-covered*
53209015	Cookie, chocolate sandwich
53209020	Cookie, chocolate sandwich, reduced fat
53209100	Cookie, chocolate, sandwich, with extra filling*
53209500	Cookie, chocolate and vanilla sandwich
53210000	Cookie, chocolate wafer
53210900	Cookie, graham cracker with chocolate and marshmallow
53211000	Cookie bar, with chocolate, nuts, and graham crackers
53215500	Cookie, coconut
53220000	Cookie, fruit-filled bar*
53220030	Cookie, fig bar*
53220040	Cookie, fig bar, fat free*
53222010	Cookie, fortune
53222020	Cookie, cone shell, ice cream type, wafer or cake
53223000	Cookie, gingersnaps
53223100	Cookie, granola
53224000	Cookie, ladyfinger
53224250	Cookie, lemon bar
53225000	Cookie, macaroon
53226000	Cookie, marshmallow, with coconut
53226500	Cookie, marshmallow, with rice cereal, no bake
53226550	Cookie, marshmallow, with rice cereal and chocolate chips
53226600	Cookie, marshmallow and peanut butter, with oat cereal, no bake
53228000	Cookie, meringue
53230000	Cookie, molasses
53231400	Cookie, multigrain, high fiber
53233000	Cookie, oatmeal
53233010	Cookie, oatmeal, with raisins*
53233040	Cookie, oatmeal, reduced fat, NS as to raisins
53233050	Cookie, oatmeal sandwich, with creme filling*
53233060	Cookie, oatmeal, with chocolate chips
53233080	Cookie, oatmeal sandwich, with peanut butter and jelly filling*
53233100	Cookie, oatmeal, with chocolate and peanut butter, no bake
53234000	Cookie, peanut butter

Food	Food description
code	Capitia papput butter with chapalate
53234100 53234250	Cookie, peanut butter, with chocolate Cookie, peanut butter with rice cereal, no bake
53234250	Cookie, peanut butter sandwich
53235500	Cookie, with peanut butter filling, chocolate-coated*
53236000	Cookie, Pizzelle
53236100	Cookie, pumpkin Cookie, raisin
53237000	
53237010 53238000	Cookie, raisin sandwich, cream-filled*
53238000	Cookie, sandwich-type, not chocolate or vanilla* Cookie, shortbread
53239000	Cookie, shortbread, reduced fat
53239010	Cookie, shortbread, reduced lat Cookie, shortbread, with icing or filling*
53239050	Pocky
53239100	Cookie, animal
53240000	Cookie, animal, with frosting or icing
53240010	Cookie, butter or sugar
53241500	Marie biscuit
53241600	Cookie, butter or sugar, with fruit and/or nuts
53242000	Cookie, sugar wafer
53242000	Cookie, vanilla sandwich
53243050	Cookie, vanila sandwich, reduced fat
53243030	Cookie, butter or sugar, with chocolate icing or filling*
53244020	Cookie, butter or sugar, with icing or filling other than chocolate*
53246000	Cookie, tea, Japanese
53240000	Cookie, vanilla wafer
53247050	Cookie, vanilla wafer, reduced fat
53247500	Cookie, vanilla with caramel, coconut, and chocolate coating
53260030	Cookie, chocolate chip, sugar free
53260200	Cookie, oatmeal, sugar free
53260300	Cookie, sandwich, sugar free
53260400	Cookie, sugar or plain, sugar free
53260500	Cookie, sugar wafer, sugar free
53260600	Cookie, peanut butter, sugar free
53261000	Cookie, gluten free
53270100	Cookies, Puerto Rican style
53300100	Pie, NFS*
53300170	Pie, individual size or tart, NFS*
53301000	Pie, apple, two crust*
53301070	Pie, apple, individual size or tart*
53301080	Pie, apple, fried pie*
53301500	Pie, apple, one crust*
53303000	Pie, blackberry, two crust*
53303500	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; two crust*
53303570	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry, individual
	size or tart*
53304000	Pie, blueberry, two crust*

Food	Food description
code 53304050	Die blueberry ope crust*
53304050	Pie, blueberry, one crust* Pie, cherry, two crust*
53305000	Pie, cherry, one crust*
53305070	Pie, cherry, individual size or tart*
53305700	Pie, lemon, not cream or meringue*
53305700	Pie, lemon, not cream or meringue, individual size or tart*
53307000	Pie, peach, two crust*
53307050	Pie, peach, one crust*
53307070	Pie, peach, individual size or tart*
53308000	Pie, pineapple, two crust*
53310000	Pie, raspberry, one crust*
53310050	Pie, raspberry, two crust*
53311000	Pie, rhubarb, two crust*
53312000	Pie, strawberry, one crust*
53313000	Pie, strawberry-rhubarb, two crust*
53314000	Pie, strawberry, individual size or tart*
53341000	Pie, banana cream*
53341500	Pie, buttermilk*
53341750	Pie, chess*
53342000	Pie, chocolate cream*
53343000	Pie, coconut cream*
53344000	Pie, custard*
53344070	Pie, custard, individual size or tart*
53344200	Mixed fruit tart filled with custard or cream cheese*
53344300	Dessert pizza*
53346000	Pie, peanut butter cream*
53346500	Pie, pineapple cream*
53347000	Pie, pumpkin*
53347070	Pie, pumpkin, individual size or tart*
53347600 53348000	Pie, squash* Pie, strawberry cream*
53348000	Pie, strawberry cream, individual size or tart*
53340070	Pie, sweet potato*
53365000	Pie, vanilla cream*
53381000	Pie, lemon meringue*
53381070	Pie, lemon meringue, individual size or tart*
53385000	Pie, pecan*
53385500	Pie, oatmeal*
53386000	Pie, pudding, flavors other than chocolate*
53387000	Pie, Toll house chocolate chip*
53390000	Pie, shoo-fly*
53391000	Pie shell
53391100	Pie shell, graham cracker
53400200	Blintz, cheese-filled*
53410100	Cobbler, apple*
53410300	Cobbler, berry*

Food	Food description
code	
53410500	Cobbler, cherry*
53410800	Cobbler, peach*
53410900	Cobbler, rhubarb*
53415100	Crisp, apple, apple dessert*
53415120	Fritter, apple
53415200	Fritter, banana
53415220	Fritter, berry
53420000	Cream puff, eclair, custard or cream filled, NS as to icing*
53420100	Cream puff, eclair, custard or cream filled, not iced*
53420200	Cream puff, eclair, custard or cream filled, iced*
53420300	Air filled fritter or fried puff, without syrup, Puerto Rican style
53420310	Wheat flour fritter, without syrup
53420400	Sopaipilla, without syrup or honey
53430000	Crepe, NS as to filling*
53430100	Crepe, chocolate filled*
53430200	Crepe, fruit filled*
53430700	Tamale, sweet
53440000	Strudel, apple*
53440300	Strudel, berry*
53440500	Strudel, cherry*
53440800	Strudel, cheese and fruit*
53441110	Baklava
53441210	Basbousa
53450000	Turnover or dumpling, apple*
53450300	Turnover or dumpling, berry*
53450500	Turnover or dumpling, cherry*
53451000	Turnover or dumpling, peach*
53451500	Turnover, guava*
53452100	Pastry, fruit-filled*
53452120	Pastry, made with bean or lotus seed paste filling, baked*
53452130	Pastry, made with bean paste and salted egg yolk filling, baked*
53452200	Pastry, Italian, with cheese*
53452400	Pastry, puff
53452420	Pastry, puff, custard or cream filled, iced or not iced*
53452450	Cheese pastry puffs*
53452500	Pastry, mainly flour and water, fried*
53453150	Empanada, Mexican turnover, fruit-filled*
53453170	Empanada, Mexican turnover, pumpkin*
53510000	Danish pastry, plain or spice*
53510100	Danish pastry, with fruit*
53511000	Danish pastry, with cheese*
53520000	Doughnut, NFS
53520100	Doughnut, cake type, plain
53520110	Doughnut, cake type
53520120	Doughnut, chocolate
53520130	Doughnut, cake type, powdered sugar

Food code	Food description
53520135	Doughnut, cake type, with icing
53520140	Doughnut, cake type, chocolate icing
53520160	Doughnut, chocolate, with chocolate icing
53520170	Doughnut holes
53520200	Churros
53520510	Beignet
53520600	Cruller, NFS
53521100	Doughnut, chocolate, raised or yeast, with chocolate icing
53521110	Doughnut, yeast type
53521120	Doughnut, chocolate, raised or yeast
53521130	Doughnut, yeast type, with chocolate icing
53521140	Doughnut, jelly*
53521210	Doughnut, custard-filled*
53521230	Doughnut, custard-filled, with icing*
53530000	Breakfast tart*
53530010	Breakfast tart, lowfat*
53610100	Coffee cake, crumb or quick-bread type
53610170	Coffee cake, crumb or quick-bread type, with fruit
53610200	Coffee cake, crumb or quick-bread type, cheese-filled*
54102010	Graham crackers
54102015	Graham crackers (Teddy Grahams)
54102020	Graham crackers, chocolate covered
54102060	Crackers, Cuban
54102100	Graham crackers, reduced fat
54102200	Graham crackers, sandwich, with filling*
54408400	Pretzels, soft, NFS
54408405	Pretzels, soft, ready-to-eat, NFS
54408410 54408411	Pretzels, soft, ready-to-eat, salted, buttered
54408411	Pretzels, soft, ready-to-eat, unsalted, buttered Pretzels, soft, ready-to-eat, salted, no butter
54408415	Pretzels, soft, ready-to-eat, unsalted, no butter
54408410	Pretzels, soft, ready-to-eat, cinnamon sugar coated
54408422	Pretzels, soft, ready-to-eat, coated or flavored
54408430	Pretzels, soft, ready-to-eat, topped with meat
54408432	Pretzels, soft, ready-to-eat, topped with cheese
54408456	Pretzels, soft, from frozen, unsalted
54408470	Pretzels, soft, filled with cheese
54408475	Pretzels, soft, from school lunch
54408480	Pretzels, soft, multigrain
54408485	Pretzels, soft, gluten free
54408487	Pretzels, soft, gluten free, coated or flavored
55100005	Pancakes, NFS
55100010	Pancakes, plain, from frozen
55100015	Pancakes, plain, reduced fat, from fozen
55100020	Pancakes, with fruit, from frozen
55100025	Pancakes, with chocolate, from frozen

Food code	Food description
55100030	Pancakes, whole grain, from frozen
55100035	Pancakes, whole grain, reduced fat, from frozen
55100040	Pancakes, gluten free, from frozen
55100050	Pancakes, plain, from fast food / restaurant
55100055	Pancakes, with fruit, from fast food / restaurant
55100060	Pancakes, with chocolate, from fast food / restaurant
55100065	Pancakes, whole grain, from fast food / restaurant
55100080	Pancakes, from school, NFS
55101000	Pancakes, plain
55101015	Pancakes, plain, reduced fat
55103000	Pancakes, with fruit
55103020	Pancakes, pumpkin
55103100	Pancakes, with chocolate
55105000	Pancakes, buckwheat
55105100	Pancakes, cornmeal
55105200	Pancakes, whole grain
55105205	Pancakes, whole grain, reduced fat
55106000	Pancakes, gluten free Waffle, NFS
55200010 55200020	Waffle, plain, from frozen
55200020	Waffle, plain, reduced fat, from frozen
55200030	Waffle, fruit, from frozen
55200040	Waffle, chocolate, from frozen
55200050	Waffle, whole grain, from frozen
55200070	Waffle, whole grain, reduced fat, from frozen
55200080	Waffle, whole grain, fruit, from frozen
55200090	Waffle, gluten free, from frozen
55200100	Waffle, plain, from fast food / restaurant
55200110	Waffle, chocolate, from fast food / restaurant
55200120	Waffle, fruit, from fast food / restaurant
55200130	Waffle, whole grain, from fast food / restaurant
55200200	Waffle, from school, NFS
55201000	Waffle, plain
55203000	Waffle, fruit
55203600	Waffle, chocolate
55203700	Waffle, cinnamon
55204000	Waffle, cornmeal
55205000	Waffle, whole grain
55208000	Waffle, gluten free
55211050	Waffle, plain, reduced fat
55212000	Waffle, whole grain, reduced fat
55300010	French toast, NFS
55300020 55300050	French toast, plain, from frozen
55300050	French toast, plain, from fast food / restaurant French toast, whole grain, from fast food / restaurant
55300055	French toast, from school, NFS
1000000	τιστιστιτισασί, ποιτη συτιουί, ΝΕΟ

Food code	Food description
55301000	Fronch toget inlain
55301000	French toast, plain French toast, whole grain
	French toast, whole grain, reduced fat
55301020	0
55301025	French toast, gluten free
55301030	French toast sticks, NFS
55301031	French toast sticks, plain, from frozen
55301040	French toast sticks, plain, from fast food / restaurant
55301048	French toast sticks, from school, NFS
55301050	French toast sticks, plain
55301055	French toast sticks, whole grain
55310100	Fried bread, Puerto Rican style
55401000	Crepe, plain
55501000	Chinese pancake
55610300	Dumpling, plain
55702100	Dosa (Indian), plain
55801000	Funnel cake with sugar
55801010	Funnel cake with sugar and fruit
56201550	Cornmeal dumpling
58100000	Burrito, taco, or quesadilla with egg*
58100005	Burrito, taco, or quesadilla with egg and potato*
58100010	Burrito, taco, or quesadilla with egg and breakfast meat*
58100013	Burrito, taco, or quesadilla with egg and breakfast meat, from fast food*
58100015	Burrito, taco, or quesadilla with egg, potato, and breakfast meat*
58100017	Burrito, taco, or quesadilla with egg, potato, and breakfast meat, from fast food*
58100020	Burrito, taco, or quesadilla with egg, beans, and breakfast meat*
58100100	Burrito with meat*
58100120	Burrito with meat and beans*
58100125	Burrito with meat and beans, from fast food*
58100135	Burrito with meat and sour cream*
58100140	Burrito with meat, beans, and sour cream*
58100145	Burrito with meat, beans, and sour cream, from fast food*
58100160	Burrito with meat, beans, and rice*
58100165	Burrito with meat, beans, rice, and sour cream*
58100200	Burrito with chicken*
58100220	Burrito with chicken and beans*
58100235	Burrito with chicken and sour cream*
58100245	Burrito with chicken, beans, and sour cream*
58100255	Burrito with chicken, beans, and rice*
58100260	Burrito with chicken, beans, rice, and sour cream*
58100300	Burrito with beans and rice, meatless*
58100320	Burrito with beans, meatless*
58100325	Burrito with beans, meatless, from fast food*
58100330	Burrito with beans, rice, and sour cream, meatless*
58100360	Chilaquiles, tortilla casserole with salsa, cheese, and egg*
58100370	Chilaquiles, tortilla casserole with salsa and cheese, no egg*
58100500	Enchilada, no sauce*

Food	Food description
code	— 19 1 91 1 1 1 1 1 9 1 9 1 ×
58100520	Enchilada with meat and beans, red-chile or enchilada sauce*
58100525	Enchilada with meat and beans, green-chile or enchilada sauce*
58100530	Enchilada with meat, red-chile or enchilada sauce*
58100535	Enchilada with meat, green-chile or enchilada sauce*
58100620 58100625	Enchilada with chicken and beans, red-chile or enchilada sauce*
58100625	Enchilada with chicken and beans, green-chile or enchilada sauce* Enchilada with chicken, red-chile or enchilada sauce*
58100630	Enchilada with chicken, green-chile or enchilada sauce*
58100035	Enchilada with beans, meatless, red-chile or enchilada sauce*
58100725	Enchilada with beans, green-chile or enchilada sauce*
58100800	Enchilada, just cheese, meatless, no beans, red-chile or enchilada sauce*
58100805	Enchilada, just cheese, meatless, no beans, red chile or enchilada sauce*
58101320	Taco or tostada with meat*
58101323	Taco or tostada with meat, from fast food*
58101325	Taco or tostada with meat and sour cream*
58101345	Soft taco with meat*
58101347	Soft taco with meat, from fast food*
58101350	Soft taco with meat and sour cream*
58101357	Soft taco with meat and sour cream, from fast food*
58101450	Soft taco with chicken*
58101457	Soft taco with chicken, from fast food*
58101460	Soft taco with chicken and sour cream*
58101520	Taco or tostada with chicken*
58101525	Taco or tostada with chicken and sour cream*
58101540	Taco or tostada with fish*
58101555	Soft taco with fish*
58101610	Soft taco with beans*
58101615	Soft taco with beans and sour cream*
58101620	Soft taco with meat and beans*
58101625	Soft taco with chicken and beans*
58101630	Soft taco with meat, beans, and sour cream*
58101635	Soft taco with chicken, beans, and sour cream*
58101720	Taco or tostada with beans*
58101725	Taco or tostada with beans and sour cream*
58101730	Taco or tostada with meat and beans*
58101733	Taco or tostada with meat and beans, from fast food*
58101735	Taco or tostada with chicken and beans*
58101745	Taco or tostada with meat, beans, and sour cream*
58101750	Taco or tostada with chicken, beans, and sour cream*
58101800 58101930	Ground beef with tomato sauce and taco seasonings on a cornbread crust* Taco or tostada salad with meat*
58101930	Taco or tostada salad with chicken*
58101935	Taco or tostada salad, meatless*
58101940	Taco or tostada salad with meat and sour cream*
58101950	Taco or tostada salad with chicken and sour cream*
58101955	Taco or tostada salad, meatless with sour cream*
55151755	

Food	Food description
code	
58104260	Gordita, sope, or chalupa with beans*
58104270	Gordita, sope, or chalupa with beans and sour cream*
58104280	Gordita, sope, or chalupa with meat and sour cream*
58104290	Gordita, sope, or chalupa with meat*
58104320	Gordita, sope, or chalupa with chicken and sour cream*
58104340	Gordita, sope, or chalupa with chicken*
58104500	Chimichanga with meat*
58104520	Chimichanga, meatless*
58104530	Chimichanga with chicken*
58104535	Chimichanga with meat and sour cream*
58104550	Chimichanga with chicken and sour cream*
58104710	Quesadilla, just cheese, meatless*
58104720	Quesadilla, just cheese, from fast food*
58104730	Quesadilla with meat*
58104740	Quesadilla with chicken*
58104745	Quesadilla with chicken, from fast food*
58104750	Quesadilla with vegetables*
58104760	Quesadilla with vegetables and meat*
58104770	Quesadilla with vegetables and chicken*
58104800	Taquito or flauta with cheese*
58104820	Taquito or flauta with meat*
58104825	Taquito or flauta with meat and cheese*
58104830	Taquito or flauta with chicken*
58104835	Taquito or flauta with chicken and cheese*
58104900	Taquito or flauta with egg*
58104905	Taquito or flauta with egg and breakfast meat*
58105000	Fajita with chicken and vegetables*
58105050	Fajita with meat and vegetables*
58105075	Fajita with vegetables*
58105100	Pupusa, cheese-filled*
58105105	Pupusa, bean-filled*
58105110	Pupusa, meat-filled*
58106200	Pizza, cheese, from frozen, thin crust*
58106205	Pizza, cheese, from frozen, thick crust*
58106210	Pizza, cheese, from restaurant or fast food, NS as to type of crust*
58106220	Pizza, cheese, from restaurant or fast food, thin crust*
58106225	Pizza, cheese, from restaurant or fast food, medium crust*
58106230	Pizza, cheese, from restaurant or fast food, thick crust*
58106233	Pizza, cheese, stuffed crust*
58106234	Pizza, cheese, from school lunch, medium crust*
58106235	Pizza, cheese, from school lunch, thin crust*
58106236	Pizza, cheese, from school lunch, thick crust*
58106250	Pizza, extra cheese, thin crust*
58106260	Pizza, extra cheese, thick crust*
58106300	Pizza, cheese, with vegetables, from frozen, thin crust*
58106305	Pizza, cheese with vegetables, from frozen, thick crust*

Food	Food description
code	
58106320	Pizza, cheese, with vegetables, from restaurant or fast food, thin crust*
58106325	Pizza, cheese, with vegetables, from restaurant or fast food, medium crust*
58106330	Pizza, cheese, with vegetables, from restaurant or fast food, thick crust*
58106345	Pizza with cheese and extra vegetables, thin crust*
58106347	Pizza with cheese and extra vegetables, medium crust*
58106358	Pizza, cheese, with fruit, thin crust*
58106359	Pizza, cheese, with fruit, medium crust*
58106360	Pizza, cheese, with fruit, thick crust*
58106512	Pizza with pepperoni, from frozen, thin crust*
58106514	Pizza with pepperoni, from frozen, medium crust*
58106516	Pizza with pepperoni, from frozen, thick crust*
58106540	Pizza with pepperoni, from restaurant or fast food, NS as to type of crust*
58106550	Pizza with pepperoni, from restaurant or fast food, thin crust*
58106555	Pizza with pepperoni, from restaurant or fast food, medium crust*
58106560	Pizza with pepperoni, from restaurant or fast food, thick crust*
58106565	Pizza with pepperoni, stuffed crust*
58106570	Pizza with pepperoni, from school lunch, thin crust*
58106578	Pizza, with pepperoni, from school lunch, medium crust*
58106580	Pizza with pepperoni, from school lunch, thick crust*
58106602	Pizza with meat other than pepperoni, from frozen, thin crust*
58106604	Pizza with meat other than pepperoni, from frozen, medium crust*
58106606	Pizza with meat other than pepperoni, from frozen, thick crust*
58106610	Pizza with meat other than pepperoni, from restaurant or fast food, NS as to type of crust*
58106620	Pizza with meat other than pepperoni, from restaurant or fast food, thin crust*
58106625	Pizza with meat other than pepperoni, from restaurant or fast food, medium crust*
58106630	Pizza with meat other than pepperoni, from restaurant or fast food, thick crust*
58106633	Pizza, with meat other than pepperoni, stuffed crust*
58106634	Pizza, with meat other than pepperoni, from school lunch, medium crust*
58106635	Pizza, with meat other than pepperoni, from school lunch, thin crust*
58106636	Pizza, with meat other than pepperoni, from school lunch, thick crust*
58106650	Pizza with extra meat, thin crust*
58106655	Pizza with extra meat, medium crust*
58106660	Pizza with extra meat, thick crust*
58106700	Pizza with meat and vegetables, from frozen, thin crust*
58106702	Pizza with meat and vegetables, from frozen, medium crust*
58106705	Pizza with meat and vegetables, from frozen, thick crust*
58106720	Pizza with meat and vegetables, from restaurant or fast food, thin crust*
58106725	Pizza with meat and vegetables, from restaurant or fast food, medium crust*
58106730	Pizza with meat and vegetables, from restaurant or fast food, thick crust*
58106736	Pizza with extra meat and extra vegetables, thin crust*
58106737	Pizza with extra meat and extra vegetables, thick crust*
58106738	Pizza with extra meat and extra vegetables, medium crust*
58106750	Pizza with meat and fruit, thin crust*
58106755	Pizza with meat and fruit, medium crust*
58106760	Pizza with meat and fruit, thick crust*
58106830	Pizza with beans and vegetables, thick crust*

Food	Food description
code	
58107050	Pizza, no cheese, thin crust*
58107205	White pizza, cheese, thin crust*
58107212	White pizza, cheese, with vegetables, thin crust*
58107222	White pizza, cheese, with meat, thin crust*
58107224	White pizza, cheese, with meat, thick crust*
58107232	White pizza, cheese, with meat and vegetables, thin crust*
58108000	Calzone, with cheese, meatless*
58108010	Calzone, with meat and cheese*
58108050	Pizza rolls*
58109015	Pizza, cheese, whole wheat thin crust*
58109020	Pizza, cheese, whole wheat thick crust*
58109030	Pizza, with meat, whole wheat thin crust*
58109040	Pizza, with meat, whole wheat thick crust*
58109050	Pizza, cheese and vegetables, whole wheat thin crust*
58109060	Pizza, cheese and vegetables, whole wheat thick crust*
58109100	Pizza, cheese, gluten-free thin crust*
58109120	Pizza, with meat, gluten-free thin crust*
58109130	Pizza, with meat, gluten-free thick crust*
58109140	Pizza, cheese and vegetables, gluten-free thin crust*
58109150	Pizza, cheese and vegetables, gluten-free thick crust*
58109210	Breakfast pizza with egg*
58117110	Cornmeal fritter, Puerto Rican style
58123120	Sweet bread dough, filled with bean paste, meatless, steamed
58124210	Pastry, cheese-filled*
58127210	Croissant sandwich, filled with ham and cheese*
58127270	Croissant sandwich with sausage and egg*
58127290	Croissant sandwich with bacon and egg*
58127310	Croissant sandwich with ham, egg, and cheese*
58127330	Croissant sandwich with sausage, egg, and cheese*
58127350	Croissant sandwich with bacon, egg, and cheese*
58127500	Vegetable submarine sandwich, with fat free spread*
58128000	Biscuit with gravy*
58128120	Cornmeal dressing with chicken or turkey and vegetables
58128210	Dressing with oysters*
58128220	Dressing with chicken or turkey and vegetables*
58128250	Dressing with meat and vegetables*
58131110	Ravioli, NS as to filling, with tomato sauce*
58131120	Ravioli, NS as to filling, with cream sauce*
58131310	Ravioli, meat-filled, no sauce*
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce*
58131330	Ravioli, meat-filled, with cream sauce*
58162090	Stuffed pepper, with meat*
58162120	Stuffed pepper, with rice, meatless*
58200250	Wrap sandwich, filled with vegetables*
58201005	Jelly sandwich, regular jelly, on white bread*
58201015	Jelly sandwich, regular jelly, on wheat bread*

Food	Food description
code	
58201025	Jelly sandwich, regular jelly, on whole wheat bread*
58201035	Jelly sandwich, reduced sugar jelly, on white bread*
58201045	Jelly sandwich, reduced sugar jelly, on wheat bread*
58306020	Beef enchilada, chili gravy, rice, refried beans, frozen meal*
58306070	Cheese enchilada, frozen meal*
58306100	Chicken enchilada, diet frozen meal*
58310210	Sausage and french toast, frozen meal*
58310310	Pancakes and sausage, frozen meal*
58421080	Sopa de tortilla, Mexican style tortilla soup, home recipe*
71930200	Casabe, cassava bread
71945020	Yam buns; Puerto Rican style
72116150	Caesar salad, with romaine, no dressing*
74701000	Tomato sandwich*
	and beverage bases
92510960	Lemonade, fruit flavored drink
92511015	Fruit flavored drink
92512040	Frozen daiguiri mix, frozen concentrate, not reconstituted**
92512090	Pina Colada, nonalcoholic
92512110	Margarita mix, nonalcoholic
92513000	Slush frozen drink
92513010	Slush frozen drink, no sugar added
92530410	Fruit flavored drink, with high vitamin C
92541010	Fruit flavored drink, powdered, reconstituted
92542000	Fruit flavored drink, with high vitamin C, powdered, reconstituted
92550610	Fruit flavored drink, with high vitamin C, diet
92550620	Fruit flavored drink, diet
92552000	Fruit flavored drink, with high vitamin C, powdered, reconstituted, diet
92552010	Fruit flavored drink, powdered, reconstituted, diet
92612010	Sugar cane beverage
92801000	Wine, nonalcoholic
92803000	Nonalcoholic malt beverage
92900110	Fruit flavored drink, powdered, not reconstituted**
92900200	Fruit flavored drink, powdered, not reconstituted, diet**
93301020	Bacardi cocktail*
93301040	Daiquiri*
93301083	Jagerbomb*
93301110	Martini*
93301150	Tom Collins*
93301160	Whiskey sour*
93301213	Vodka and lemonade*
93301216	Vodka and energy drink*
93301360	Long Island iced tea*
93301500	Frozen daiquiri*
93301510	Frozen margarita*
95310200	Energy drink (Full Throttle)
95310200	Energy drink (Monster)
/0010400	

Food	Food description
cod e 95310500	Energy drink (Mountain Dew AMP)
95310560	Energy drink (NOS)
95310600	Energy drink (Red Bull)
95310700	Energy drink (Rockstar)
95310750	Energy drink (SoBe Energize Energy Juice Drink)
95311000	Energy Drink
95312400	Energy drink, low calorie (Monster)
95312410	Energy drink, sugar free (Monster)
95312560	Energy drink (Ocean Spray Cran-Energy Juice Drink)
95312600	Energy drink, sugar-free (Red Bull)
95312700	Energy drink, sugar free (Rockstar)
95312900	Energy drink (XS)
95313200	Energy drink, sugar free
95342000	Fruit juice, acai blend
Cheese	
13252600	Tiramisu*
14010000	Cheese, NFS
14101010	Cheese, Blue or Roquefort
14102010	Cheese, Brick
14103020	Cheese, Brie
14104100	Cheese, Cheddar
14104110	Cheese, Cheddar, reduced fat
14104115	Cheese, Cheddar, nonfat or fat free
14104200	Cheese, Colby
14104250 14104400	Cheese, Colby Jack Cheese, Feta
14104400	Cheese, Fontina
14104000	Cheese, goat
14105010	Cheese, Gouda or Edam
14105200	Cheese, Gruyere
14106200	Cheese, Monterey
14106500	Cheese, Monterey, reduced fat
14107010	Cheese, Mozzarella, NFS
14107030	Cheese, Mozzarella, part skim
14107040	Cheese, Mozzarella, reduced sodium
14107060	Cheese, Mozzarella, nonfat or fat free
14107200	Cheese, Muenster
14107250	Cheese, Muenster, reduced fat
14108010	Cheese, Parmesan, dry grated
14108015	Cheese, Parmesan, dry grated, reduced fat
14108020	Cheese, Parmesan, hard
14108400	Cheese, Provolone
14108420	Cheese, provolone, reduced fat
14109010	Cheese, Swiss
14109020	Cheese, Swiss, reduced sodium
14109030	Cheese, Swiss, reduced fat

Food	Food description
code	
14110010	Cheese, Cheddar, reduced sodium
14120010	Cheese, Mexican blend
14120020	Cheese, Mexican blend, reduced fat
14131000	Queso Anejo, aged Mexican cheese
14131500	Queso Asadero
14132000	Queso Chihuahua
14133000	Queso Fresco
14134000	Queso cotija
14200100	Cheese, cottage, NFS
14201010	Cheese, cottage, creamed, large or small curd
14201200	Cottage cheese, farmer's
14201500	Cheese, Ricotta
14202010	Cheese, cottage, with fruit
14202020	Cheese, cottage, with vegetables
14203020	Cheese, cottage, salted, dry curd
14203510	Puerto Rican white cheese
14204010	Cheese, cottage, low fat
14204020	Cheese, cottage, lowfat, with fruit
14206010	Cheese, cottage, lowfat, low sodium
14207010	Cheese, cottage, lowfat, lactose reduced
14301010	Cream cheese, regular, plain
14301100	Cream cheese, regular, flavored
14303010	Cream cheese, light
14410100	Cheese, American and Swiss blends
14410110	Cheese, American
14410120	Cheese, American, reduced fat
14410130	Cheese, American, nonfat or fat free
14410210	Cheese, American, reduced sodium
14410330	Cheese spread, American or Cheddar cheese base, reduced fat
14410380	Cream cheese spread, fat free
14410500	Cheese, processed cheese food
14410600	Cheese, processed, with vegetables
14410620	Cheese, with wine
14420100	Cheese spread, American or Cheddar cheese base
14420160	Cheese spread, Swiss cheese base
14420200	Cheese spread, cream cheese, regular
14420210	Cheese spread, cream cheese, light
14420300	Cheese spread, pressurized can
14502000	Imitation cheese
14610200	Cheese, cottage cheese, with gelatin dessert*
14610520	Cheese ball
14620300	Topping from cheese pizza*
14620310	Topping from vegetable pizza*
14620320	Topping from meat pizza*
14620330	Topping from meat and vegetable pizza*
14630200	Cheese souffle*
. 1000200	cheese soume

Food	Food description
code	
14640000	Cheese sandwich, NFS*
14640002	Cheese sandwich, American cheese, on white bread, no spread*
14640004	Cheese sandwich, American cheese, on wheat bread, no spread*
14640006	Cheese sandwich, American cheese, on whole wheat bread, no spread*
14640008	Cheese sandwich, Cheddar cheese, on white bread, no spread*
14640010	Cheese sandwich, Cheddar cheese, on wheat bread, no spread*
14640012	Cheese sandwich, Cheddar cheese, on whole wheat bread, no spread*
14640014	Cheese sandwich, reduced fat American cheese, on white bread, no spread*
14640018	Cheese sandwich, reduced fat American cheese, on whole wheat bread, no spread*
14640020	Cheese sandwich, reduced fat Cheddar cheese, on white bread, no spread*
14640024	Cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread, no spread*
14640026	Cheese sandwich, American cheese, on white bread, with mayonnaise*
14640028	Cheese sandwich, American cheese, on wheat bread, with mayonnaise*
14640030	Cheese sandwich, American cheese, on whole wheat bread, with mayonnaise*
14640032	Cheese sandwich, Cheddar cheese, on white bread, with mayonnaise*
14640034	Cheese sandwich, Cheddar cheese, on wheat bread, with mayonnaise*
14640036	Cheese sandwich, Cheddar cheese, on whole wheat bread, with mayonnaise*
14640042	Cheese sandwich, reduced fat American cheese, on whole wheat bread, with mayonnaise*
14640046	Cheese sandwich, reduced fat Cheddar cheese, on wheat bread, with mayonnaise*
14640048	Cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread, with mayonnaise*
14640050	Cheese sandwich, American cheese, on white bread, with butter*
14640052	Cheese sandwich, American cheese, on wheat bread, with butter*
14640054	Cheese sandwich, American cheese, on whole wheat bread, with butter*
14640056	Cheese sandwich, Cheddar cheese, on white bread, with butter*
14640058	Cheese sandwich, Cheddar cheese, on wheat bread, with butter*
14640060	Cheese sandwich, Cheddar cheese, on whole wheat bread, with butter*
14640062	Cheese sandwich, reduced fat American cheese, on white bread, with butter*
14640068	Cheese sandwich, reduced fat Cheddar cheese, on white bread, with butter*
14640100 14640105	Grilled cheese sandwich, NFS*
14640105	Grilled cheese sandwich, American cheese, on white bread* Grilled cheese sandwich, American cheese, on wheat bread*
14640110	Grilled cheese sandwich, American cheese, on whole wheat bread*
14640115	Grilled cheese sandwich, Cheddar cheese, on white bread*
14640125	Grilled cheese sandwich, Cheddar cheese, on wheat bread*
14640135	Grilled cheese sandwich, Cheddar cheese, on whole wheat bread*
14640155	Grilled cheese sandwich, cheudal cheese, on whole wheat blead Grilled cheese sandwich, reduced fat American cheese, on white bread*
14640155	Grilled cheese sandwich, reduced fat American cheese, on what bread*
14640165	Grilled cheese sandwich, reduced fat American cheese, on whole wheat bread*
14640185	Grilled cheese sandwich, reduced fat Cheddar cheese, on white bread*
14640100	Grilled cheese sandwich, reduced fat Cheddar cheese, on what bread*
14640190	Grilled cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread*
14660200	Mozzarella sticks, breaded, baked, or fried
14670000	Mozzarella cheese, tomato, and basil, with oil and vinegar dressing*
25210150	Frankfurter or hot dog, cheese-filled*
25220150	Beef sausage with cheese*
25220150	Bratwurst, with cheese*
20220000	

Food	Food description
cod e 27111430	Chili can come. NS as to beens, with abases*
	Chili con carne, NS as to beans, with cheese* Chili con carne with beans and cheese*
27111440	
27135110	Veal parmigiana*
27146250	Chicken or turkey cordon bleu*
27146300	Chicken or turkey parmigiana*
27212050	Beef and macaroni with cheese sauce*
27341000	Chicken or turkey, potatoes, corn, and cheese, with gravy*
27416300	Beef taco filling: beef, cheese, tomato, taco sauce*
27443150	Chicken or turkey divan*
27446315	Chicken or turkey garden salad with bacon and cheese, chicken and/or turkey, bacon, cheese,
2744/220	lettuce and/or greens, tomato and/or carrots, other vegetables, no dressing*
27446320	Chicken or turkey, breaded, fried, garden salad with bacon and cheese, chicken and/or turkey,
2744(220	bacon, cheese, lettuce and/or greens, tomato and/or carrots, other vegetables, no dressing*
27446330	Chicken or turkey garden salad with cheese, chicken and/or turkey, cheese, lettuce and/or greens,
2744/2/0	tomato and/or carrots, other vegetables, no dressing*
27446360	Chicken or turkey caesar garden salad, chicken and/or turkey, lettuce, tomato, cheese, no dressing*
27446362	Chicken or turkey, breaded, fried, caesar garden salad, chicken and/or turkey, lettuce, tomatoes,
27450000	cheese, no dressing* Tuna salad with cheese*
27450090 27460510	Antipasto with ham, fish, cheese, vegetables*
27500300	Wrap sandwich, NFS*
27500300	Beef sandwich, NFS*
27510000	Cheeseburger slider, from fast food*
27510140	Cheeseburger, 1 miniature patty, with condiments, on miniature bun, from fast food / restaurant*
27510145	Cheeseburger, 1 miniature patty, on miniature bun, from school*
27510150	Cheeseburger, NFS*
27510155	Cheeseburger, from fast food, 1 small patty*
27510100	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510105	Cheeseburger (Burger King)*
27510170	Whopper Jr with cheese (Burger King)*
27510171	Cheeseburger (McDonalds)*
27510172	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Kid's
2/0101/0	Cheeseburger)*
27510174	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr.
2/0101/1	Cheeseburger)*
27510175	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr.
2/0101/0	Cheeseburger Deluxe)*
27510190	Cheeseburger, from school cafeteria*
27510191	Cheeseburger slider*
27510195	Cheeseburger, on white bun, 1 small patty*
27510196	Cheeseburger, on wheat bun, 1 small patty*
27510205	Cheeseburger, 1 small patty, with condiments, on white bun*
27510206	Cheeseburger, 1 small patty, with condiments, on wheat bun*
27510207	Cheeseburger, 1 small patty, with condiments, on whole wheat bun*
27510215	Cheeseburger, from fast food, 1 medium patty*
27510225	Cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*

Food	Food description
code	
27510231	Whopper with cheese (Burger King)*
27510232	Quarter Pounder with cheese (McDonalds)*
27510233	Cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant (Wendy's 1/4 lb Single with cheese)*
27510235	Cheeseburger submarine sandwich with lettuce, tomato and spread*
27510241	Cheeseburger, on white bun, 1 medium patty*
27510242	Cheeseburger, on wheat bun, 1 medium patty*
27510243	Cheeseburger, 1 medium patty, plain, on whole wheat bun*
27510245	Cheeseburger, on white bun, 1 large patty*
27510246	Cheeseburger, on wheat bun, 1 large patty*
27510251	Cheeseburger, 1 medium patty, with condiments, on white bun*
27510252	Cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510253	Cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510254	Double cheeseburger, on white bun, 2 small patties*
27510257	Double cheeseburger, on white bun, 2 medium patties*
27510258	Double cheeseburger, on wheat bun, 2 medium patties*
27510261	Cheeseburger, from fast food, 1 large patty*
27510262	Double cheeseburger, on white bun, 2 large patties*
27510266	Cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510276	Bacon cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510281	Bacon cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr.
	Bacon Cheeseburger)*
27510305	Bacon cheeseburger, 1 medium patty, plain, on bun, from fast food / restaurant*
27510312	Bacon cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510331	Bacon cheeseburger, 1 medium patty, plain, on white bun*
27510341	Bacon cheeseburger, 1 medium patty, with condiments, on white bun*
27510342	Bacon cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510343	Bacon cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510346	Bacon cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510371	Double cheeseburger, from fast food, 2 small patties*
27510376	Double cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant*
27510386	Double cheeseburger (Burger King)*
27510387	Double cheeseburger (McDonalds)*
27510391	Double cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant (Wendy's
	Double Stack)*
27510401	Double cheeseburger, from fast food, 2 medium patties*
27510405	Double cheeseburger, from fast food, 2 large patties*
27510406	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510412	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant
	(McDonald's Double Quarter Pounder with Cheese)*
27510413	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant
	(Wendy's 1/2 lb Double with cheese)*
27510431	Double bacon cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant
	(Burger King Bacon Double Cheeseburger)*
27510446	Double bacon cheeseburger, 2 medium patties, plain, on bun, from fast food / restaurant*
27510451	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*

Food	Food description
code	
27510465	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Wendy's Baconator)*
27510475	Double bacon cheeseburger, 2 large patties, with condiments, on bun, from fast food / restaurant*
27510486	Triple cheeseburger, 3 medium patties, with condiments, on bun, from fast food / restaurant*
27510705	Chiliburger, with or without cheese, on bun*
27510950	Reuben sandwich, corned beef sandwich with sauerkraut and cheese, with spread*
27513041	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread*
27513050	Roast beef sandwich with cheese*
27515020	Steak and cheese submarine sandwich, with lettuce and tomato*
27515030	Steak and cheese sandwich, plain, on roll*
27515040	Steak and cheese submarine sandwich, plain, on roll*
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll*
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread*
27520156	Bacon, lettuce, tomato, and cheese submarine sandwich, with spread*
27520160	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread*
27520166	Bacon, breaded fried chicken fillet, and tomato club sandwich with cheese, lettuce and spread*
27520320	Ham and cheese sandwich, with lettuce and spread*
27520350	Ham and cheese sandwich, with spread, grilled*
27520370	Hot ham and cheese sandwich, on bun*
27520390	Ham and cheese submarine sandwich, with lettuce, tomato and spread*
27520410	Cuban sandwich, with spread*
27540111	Sliced chicken sandwich, with cheese and spread*
27540147	Chicken fillet sandwich, fried, from fast food, with cheese*
27540151	Chicken fillet, breaded, fried, sandwich with cheese, lettuce, tomato and spread*
27540153	Chicken fillet sandwich, grilled, from fast food, with cheese*
27540176	Chicken fillet sandwich, fried, on white bun; with cheese*
27540186	Chicken fillet sandwich, fried, on wheat bun, with cheese*
27540196	Chicken fillet sandwich, grilled, on white bun, with cheese*
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato*
27540206	Chicken fillet sandwich, grilled, on wheat bun, with cheese*
27540210	Chicken fillet wrap sandwich, fried, from fast food*
27540250	Chicken fillet, broiled, sandwich with cheese, on whole wheat roll, with lettuce, tomato and non- mayonnaise type spread*
27540280	Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread*
27540291	Chicken submarine sandwich, with cheese, lettuce, tomato and spread*
27540296	Buffalo chicken submarine sandwich with cheese*
27540300	Chicken fillet wrap sandwich, grilled, from fast food*
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread*
27540361	Turkey and bacon submarine sandwich, with cheese, lettuce, tomato and spread*
27541001	Turkey, ham, and roast beef club sandwich with cheese, lettuce, tomato, and spread*
27550100	Fish sandwich, fried, from fast food, with cheese*
27550300	Fish sandwich, NFS*
27550405	Fish sandwich, fried, on white bun, with cheese*
27550425	Fish wrap sandwich*
27550730	Tuna salad sandwich, on bread, with cheese*
27550745	Tuna salad sandwich, on bun, with cheese*

Food	Food description
code	
27550751	Tuna salad submarine sandwich, with cheese, lettuce and tomato*
27550755	Tuna salad wrap sandwich*
27560120	Bologna and cheese sandwich, with spread*
27560670	Sausage and cheese on English muffin*
27560705	Sausage balls, made with biscuit mix and cheese*
27560910	Cold cut sumarine sandwich, with cheese, lettuce, tomato and spread*
28110380	Salisbury steak with gravy, macaroni and cheese, frozen meal*
28110660	Meatballs, Swedish, in gravy, with noodles, diet frozen meal*
28140100	Chicken dinner, NFS, frozen meal*
28141050	Chicken patty parmigiana, breaded, with vegetable, diet frozen meal*
28143150	Chicken and vegetable entree with noodles, diet frozen meal*
28143170	Chicken in cream sauce with noodles and vegetable, frozen meal*
28144100	Chicken and vegetable entree with noodles and cream sauce, frozen meal*
32105190	Egg casserole with bread, cheese, milk and meat*
32130100	Egg omelet or scrambled egg, with cheese, made with margarine*
32130110	Egg omelet or scrambled egg, with cheese, made with oil*
32130120	Egg omelet or scrambled egg, with cheese, made with butter*
32130140	Egg omelet or scrambled egg, with cheese, made with animal fat or meat drippings*
32130160	Egg omelet or scrambled egg, with cheese, made with cooking spray*
32130170	Egg omelet or scrambled egg, with cheese, no added fat*
32130290	Egg omelet or scrambled egg, with cheese and meat, NS as to fat*
32130300	Egg omelet or scrambled egg, with cheese and meat, made with margarine*
32130310	Egg omelet or scrambled egg, with cheese and meat, made with oil*
32130320	Egg omelet or scrambled egg, with cheese and meat, made with butter*
32130360	Egg omelet or scrambled egg, with cheese and meat, made with cooking spray*
32130365	Egg omelet or scrambled egg, with cheese and meat, NS as to fat type*
32130370	Egg omelet or scrambled egg, with cheese and meat, no added fat*
32130600	Egg omelet or scrambled egg, with cheese and tomatoes, fat added*
32130610	Egg omelet or scrambled egg, with cheese and tomatoes, no added fat*
32130620	Egg omelet or scrambled egg, with cheese and tomatoes, NS as to fat*
32130630	Egg omelet or scrambled egg, with cheese and dark-green vegetables, fat added*
32130640	Egg omelet or scrambled egg, with cheese and dark-green vegetables, no added fat*
32130650	Egg omelet or scrambled egg, with cheese and dark-green vegetables, NS as to fat*
32130660	Egg omelet or scrambled egg, with cheese, tomatoes, and dark-green vegetables, fat added*
32130680	Egg omelet or scrambled egg, with cheese, tomatoes, and dark-green vegetables, NS as to fat*
32130690	Egg omelet or scrambled egg, with cheese and vegetables other than dark green and/or tomatoes,
32130700	fat added* Egg omelet or scrambled egg, with cheese and vegetables other than dark green and/or tomatoes,
	no added fat*
32130710	Egg omelet or scrambled egg, with cheese and vegetables other than dark green and/or tomatoes, NS as to fat*
32131000	Egg omelet or scrambled egg, with cheese, meat, and tomatoes, fat added*
32131000	Egg omelet or scrambled egg, with cheese, meat, and tomatoes, no added fat*
32131010	Egg omelet or scrambled egg, with cheese, meat, and tomatoes, NS as to fat*
32131020	Egg omelet or scrambled egg, with cheese, meat, and dark-green vegetables, fat added*
32131030	Egg omelet or scrambled egg, with cheese, meat, and dark-green vegetables, no added fat*
JZ I J 1040	Egg officier of scialibled egg, with cheese, meat, and dark-green vegetables, no added lat

Food	Food description
cod e 32131050	Egg omelet or scrambled egg, with cheese, meat, and dark-green vegetables, NS as to fat*
32131050	Egg omelet or scrambled egg, with cheese, meat, tomatoes, and dark-green vegetables, NS as to rat Egg omelet or scrambled egg, with cheese, meat, tomatoes, and dark-green vegetables, fat added*
32131000	Egg omelet or scrambled egg, with cheese, meat, tomatoes, and dark-green vegetables, na added Egg omelet or scrambled egg, with cheese, meat, tomatoes, and dark-green vegetables, no added
52151070	fat*
32131080	Egg omelet or scrambled egg, with cheese, meat, tomatoes, and dark-green vegetables, NS as to fat*
32131090	Egg omelet or scrambled egg, with cheese, meat, and vegetables other than dark-green and/or tomatoes, fat added*
32131100	Egg omelet or scrambled egg, with cheese, meat, and vegetables other than dark-green and/or tomatoes, no added fat*
32131110	Egg omelet or scrambled egg, with cheese, meat, and vegetables other than dark-green and/or tomatoes, NS as to fat*
32202000	Egg, cheese, ham, and bacon on bun*
32202010	Egg, cheese, and ham on English muffin*
32202025	Egg, cheese and ham on bagel*
32202030	Egg, cheese, and sausage on English muffin*
32202034	Egg, cheese, and sausage on bun*
32202035	Egg, extra cheese, and extra sausage, on bun*
32202045	Egg, cheese, and steak on bagel*
32202050	Egg, cheese, and sausage on biscuit*
32202055	Egg, cheese, and sausage griddle cake sandwich*
32202070	Egg, cheese, and bacon on biscuit*
32202075	Egg, cheese, and bacon griddle cake sandwich*
32202080	Egg, cheese, and bacon on English muffin*
32202085	Egg, cheese and bacon on bagel*
32202120	Egg, cheese and sausage on bagel*
32202200	Egg and cheese on biscuit*
32400100	Egg white, omelet, scrambled, or fried, with cheese*
32400110	Egg white, omelet, scrambled, or fried, with cheese, fat not added in cooking*
32400120	Egg white, omelet, scrambled, or fried, with cheese, NS as to fat added in cooking*
32400400	Egg white, omelet, scrambled, or fried, with cheese and meat*
32400500	Egg white, omelet, scrambled, or fried, with cheese and vegetables*
32400510	Egg white, omelet, scrambled, or fried, with cheese and vegetables, fat not added in cooking*
32400700	Egg white, omelet, scrambled, or fried, with cheese, meat, and vegetables*
32400710	Egg white, omelet, scrambled, or fried, with cheese, meat, and vegetables, fat not added in cooking*
33401000	Egg substitute, omelet, scrambled, or fried, with cheese*
33401020	Egg substitute, omelet, scrambled, or fried, with cheese, NS as to fat added in cooking*
33401300	Egg substitute, omelet, scrambled, or fried, with cheese and meat*
33401310	Egg substitute, omelet, scrambled, or fried, with cheese and meat, fat not added in cooking*
33401400	Egg substitute, omelet, scrambled, or fried, with cheese and vegetables*
33401600	Egg substitute, omelet, scrambled, or fried, with cheese, meat, and vegetables*
41205020	Refried beans with cheese*
41420050	Soybean curd cheese
51121045	Garlic bread, with parmesan cheese, from fast food / restaurant*
51121055	Garlic bread, with parmesan cheese, from frozen*
51121065	Garlic bread, with melted cheese, from fast food / restaurant*

Food	Food description
code	Carl's have all with mostly at the second former formers *
51121075	Garlic bread, with melted cheese, from frozen*
51154600	Roll, cheese*
51184230	Breadsticks, soft, with parmesan cheese, from fast food / restaurant*
51184240	Breadsticks, soft, with parmesan cheese, from frozen*
51184250	Breadsticks, soft, topped with melted cheese*
51184260	Breadsticks, soft, stuffed with melted cheese*
52104100	Biscuit, cheese*
53104500	Cheesecake*
53104550	Cheesecake with fruit*
53104600	Cheesecake, chocolate*
53400200	Blintz, cheese-filled*
53440800	Strudel, cheese and fruit*
53452200	Pastry, Italian, with cheese*
53452450	Cheese pastry puffs*
53511000	Danish pastry, with cheese*
53610200	Coffee cake, crumb or quick-bread type, cheese-filled*
56201090	Grits, with cheese, NS as to fat*
56201091	Grits, with cheese, no added fat*
56201092	Grits, with cheese, fat added*
58100000	Burrito, taco, or quesadilla with egg*
58100005	Burrito, taco, or quesadilla with egg and potato*
58100010	Burrito, taco, or quesadilla with egg and breakfast meat*
58100015	Burrito, taco, or quesadilla with egg, potato, and breakfast meat*
58100017	Burrito, taco, or quesadilla with egg, potato, and breakfast meat, from fast food*
58100020	Burrito, taco, or quesadilla with egg, beans, and breakfast meat*
58100100	Burrito with meat*
58100120	Burrito with meat and beans*
58100135	Burrito with meat and sour cream*
58100140	Burrito with meat, beans, and sour cream*
58100160	Burrito with meat, beans, and rice*
58100165	Burrito with meat, beans, rice, and sour cream* Burrito with chicken*
58100200	Burrito with chicken and beans*
58100220 58100235	
	Burrito with chicken and sour cream*
58100245 58100255	Burrito with chicken, beans, and sour cream*
	Burrito with chicken, beans, and rice*
58100260 58100300	Burrito with chicken, beans, rice, and sour cream* Burrito with beans and rice, meatless*
58100300	Burrito with beans, meatless*
58100330 58100360	Burrito with beans, rice, and sour cream, meatless* Chilaguiles, tortilla casserole with salsa, cheese, and egg*
58100360 58100370	Chilaquiles, tortilla casserole with salsa and cheese, no egg*
58100370	Enchilada, no sauce*
58100500	Enchilada, no sauce Enchilada with meat and beans, red-chile or enchilada sauce*
58100520	Enchilada with meat and beans, green-chile or enchilada sauce*
58100525	Enchilada with meat, red-chile or enchilada sauce*
20100220	Enchnaua Willi Ingal, igu-ching UI Chichinaua Saule

Food	Food description
code	Fuch linds with most supervised by an exception of a second *
58100535	Enchilada with meat, green-chile or enchilada sauce*
58100620	Enchilada with chicken and beans, red-chile or enchilada sauce*
58100625	Enchilada with chicken and beans, green-chile or enchilada sauce*
58100630	Enchilada with chicken, red-chile or enchilada sauce*
58100635	Enchilada with chicken, green-chile or enchilada sauce*
58100720	Enchilada with beans, meatless, red-chile or enchilada sauce*
58100725	Enchilada with beans, green-chile or enchilada sauce*
58100800	Enchilada, just cheese, meatless, no beans, red-chile or enchilada sauce*
58100805 58101320	Enchilada, just cheese, meatless, no beans, green-chile or enchilada sauce* Taco or tostada with meat*
58101320	Taco or tostada with meat and sour cream*
58101325	Soft taco with meat*
58101345	Soft taco with meat and sour cream*
58101350	Soft taco with chicken*
58101450	Soft taco with chicken and sour cream*
58101520	Taco or tostada with chicken*
58101525	Taco or tostada with chicken and sour cream*
58101540	Taco or tostada with fish*
58101555	Soft taco with fish*
58101610	Soft taco with beans*
58101615	Soft taco with beans and sour cream*
58101620	Soft taco with meat and beans*
58101625	Soft taco with chicken and beans*
58101630	Soft taco with meat, beans, and sour cream*
58101635	Soft taco with chicken, beans, and sour cream*
58101720	Taco or tostada with beans*
58101725	Taco or tostada with beans and sour cream*
58101730	Taco or tostada with meat and beans*
58101735	Taco or tostada with chicken and beans*
58101745	Taco or tostada with meat, beans, and sour cream*
58101750	Taco or tostada with chicken, beans, and sour cream*
58101820	Mexican casserole made with ground beef, beans, tomato sauce, cheese, taco seasonings, and
F0101020	corn chips*
58101830	Mexican casserole made with ground beef, tomato sauce, cheese, taco seasonings, and corn chips*
58101930	Taco or tostada salad with meat*
58101935	Taco or tostada salad with chicken*
58101940 58101945	Taco or tostada salad, meatless* Taco or tostada salad with meat and sour cream*
58101945	Taco or tostada salad with chicken and sour cream*
58101955	Taco or tostada salad, meatless with sour cream*
58104090	Nachos with cheese and sour cream*
58104070	Nachos with cheese*
58104120	Nachos with meat and cheese*
58104150	Nachos with chicken and cheese*
58104160	Nachos with chili*
58104180	Nachos with meat, cheese, and sour cream*

Food	Food description
code	
58104190	Nachos with chicken, cheese, and sour cream*
58104260	Gordita, sope, or chalupa with beans*
58104270	Gordita, sope, or chalupa with beans and sour cream*
58104280	Gordita, sope, or chalupa with meat and sour cream*
58104290	Gordita, sope, or chalupa with meat*
58104320	Gordita, sope, or chalupa with chicken and sour cream*
58104340	Gordita, sope, or chalupa with chicken*
58104500	Chimichanga with meat*
58104520	Chimichanga, meatless*
58104530	Chimichanga with chicken*
58104535	Chimichanga with meat and sour cream*
58104550	Chimichanga with chicken and sour cream*
58104710	Quesadilla, just cheese, meatless*
58104720	Quesadilla, just cheese, from fast food*
58104730	Quesadilla with meat*
58104740	Quesadilla with chicken*
58104750	Quesadilla with vegetables*
58104760	Quesadilla with vegetables and meat*
58104770	Quesadilla with vegetables and chicken*
58104800	Taquito or flauta with cheese*
58104825	Taquito or flauta with meat and cheese*
58104835	Taquito or flauta with chicken and cheese*
58104900	Taquito or flauta with egg*
58104905	Taquito or flauta with egg and breakfast meat*
58105075	Fajita with vegetables*
58105100	Pupusa, cheese-filled*
58105105	Pupusa, bean-filled*
58106200	Pizza, cheese, from frozen, thin crust*
58106205	Pizza, cheese, from frozen, thick crust*
58106210	Pizza, cheese, from restaurant or fast food, NS as to type of crust*
58106220	Pizza, cheese, from restaurant or fast food, thin crust*
58106225	Pizza, cheese, from restaurant or fast food, medium crust*
58106230	Pizza, cheese, from restaurant or fast food, thick crust*
58106233	Pizza, cheese, stuffed crust*
58106234	Pizza, cheese, from school lunch, medium crust*
58106235	Pizza, cheese, from school lunch, thin crust*
58106236	Pizza, cheese, from school lunch, thick crust*
58106250	Pizza, extra cheese, thin crust*
58106260	Pizza, extra cheese, thick crust*
58106300	Pizza, cheese, with vegetables, from frozen, thin crust*
58106305	Pizza, cheese with vegetables, from frozen, thick crust*
58106320	Pizza, cheese, with vegetables, from restaurant or fast food, thin crust*
58106325	Pizza, cheese, with vegetables, from restaurant or fast food, medium crust*
58106330	Pizza, cheese, with vegetables, from restaurant or fast food, thick crust*
58106345	Pizza with cheese and extra vegetables, thin crust*
58106347	Pizza with cheese and extra vegetables, medium crust*

Food Food description code 58106358 Pizza, cheese, with fruit, thin crust* 58106359 Pizza, cheese, with fruit, medium crust* 58106360 Pizza, cheese, with fruit, thick crust* 58106512 Pizza with pepperoni, from frozen, thin crust* 58106514 Pizza with pepperoni, from frozen, medium crust* 58106516 Pizza with pepperoni, from frozen, thick crust* 58106540 Pizza with pepperoni, from restaurant or fast food, NS as to type of crust* 58106550 Pizza with pepperoni, from restaurant or fast food, thin crust* 58106555 Pizza with pepperoni, from restaurant or fast food, medium crust* 58106560 Pizza with pepperoni, from restaurant or fast food, thick crust* 58106565 Pizza with pepperoni, stuffed crust* 58106570 Pizza with pepperoni, from school lunch, thin crust* 58106578 Pizza, with pepperoni, from school lunch, medium crust* 58106580 Pizza with pepperoni, from school lunch, thick crust* 58106602 Pizza with meat other than pepperoni, from frozen, thin crust* 58106604 Pizza with meat other than pepperoni, from frozen, medium crust* 58106606 Pizza with meat other than pepperoni, from frozen, thick crust* 58106610 Pizza with meat other than pepperoni, from restaurant or fast food, NS as to type of crust* 58106620 Pizza with meat other than pepperoni, from restaurant or fast food, thin crust* 58106625 Pizza with meat other than pepperoni, from restaurant or fast food, medium crust* 58106630 Pizza with meat other than pepperoni, from restaurant or fast food, thick crust* 58106633 Pizza, with meat other than pepperoni, stuffed crust* 58106634 Pizza, with meat other than pepperoni, from school lunch, medium crust* 58106635 Pizza, with meat other than pepperoni, from school lunch, thin crust* 58106636 Pizza, with meat other than pepperoni, from school lunch, thick crust* 58106650 Pizza with extra meat, thin crust* 58106655 Pizza with extra meat, medium crust* 58106660 Pizza with extra meat, thick crust* 58106700 Pizza with meat and vegetables, from frozen, thin crust* 58106702 Pizza with meat and vegetables, from frozen, medium crust* 58106705 Pizza with meat and vegetables, from frozen, thick crust* 58106720 Pizza with meat and vegetables, from restaurant or fast food, thin crust* 58106725 Pizza with meat and vegetables, from restaurant or fast food, medium crust* 58106730 Pizza with meat and vegetables, from restaurant or fast food, thick crust* 58106736 Pizza with extra meat and extra vegetables, thin crust* 58106737 Pizza with extra meat and extra vegetables, thick crust* 58106738 Pizza with extra meat and extra vegetables, medium crust* 58106750 Pizza with meat and fruit, thin crust* 58106755 Pizza with meat and fruit, medium crust* 58106760 Pizza with meat and fruit, thick crust* 58106830 Pizza with beans and vegetables, thick crust* 58107205 White pizza, cheese, thin crust* 58107212 White pizza, cheese, with vegetables, thin crust* 58107222 White pizza, cheese, with meat, thin crust* 58107224 White pizza, cheese, with meat, thick crust* 58107232 White pizza, cheese, with meat and vegetables, thin crust*

Food	Food description
code	
58108000	Calzone, with cheese, meatless*
58108010	Calzone, with meat and cheese*
58108050	Pizza rolls*
58109015	Pizza, cheese, whole wheat thin crust*
58109020	Pizza, cheese, whole wheat thick crust*
58109030	Pizza, with meat, whole wheat thin crust*
58109040	Pizza, with meat, whole wheat thick crust*
58109050	Pizza, cheese and vegetables, whole wheat thin crust*
58109060	Pizza, cheese and vegetables, whole wheat thick crust*
58109100	Pizza, cheese, gluten-free thin crust*
58109120	Pizza, with meat, gluten-free thin crust*
58109130	Pizza, with meat, gluten-free thick crust*
58109140	Pizza, cheese and vegetables, gluten-free thin crust*
58109150	Pizza, cheese and vegetables, gluten-free thick crust*
58109210	Breakfast pizza with egg*
58111200	Puffs, fried, crab meat and cream cheese filled*
58116115	Empanada, Mexican turnover, filled with cheese and vegetables*
58116310	Cheese turnover, Puerto Rican style*
58121610	Dumpling, potato- or cheese-filled*
58122210	Gnocchi, cheese*
58122320	Knish, cheese*
58124210	Pastry, cheese-filled*
58124220	Pastry, egg and cheese filled*
58125180	Cheese quiche, meatless*
58126130	Turnover, meat- and cheese-filled, no gravy*
58126150	Turnover, meat- and cheese-filled, tomato-based sauce*
58126160	Turnover, cheese-filled, tomato-based sauce*
58126270 58126290	Turnover, chicken- or turkey-, and cheese-filled, no gravy* Turnover, meat- and cheese-filled, lower in fat*
58126300	Turnover, meat- and cheese-filled, tomato-based sauce, lower in fat*
58126400	Turnover, filled with egg, meat and cheese*
58126410	Turnover, filled with egg, meat, and cheese, lower in fat*
58127150	Vegetables and cheese in pastry*
58127210	Croissant sandwich, filled with ham and cheese*
58127310	Croissant sandwich with ham, egg, and cheese*
58127330	Croissant sandwich with sausage, egg, and cheese*
58127350	Croissant sandwich with bacon, egg, and cheese*
58130011	Lasagna with meat*
58130013	Lasagna with meat, canned*
58130014	Lasagna with meat, from restaurant*
58130015	Lasagna with meat, home recipe*
58130016	Lasagna with meat, frozen*
58130020	Lasagna with meat and spinach*
58130140	Lasagna with chicken or turkey*
58130150	Lasagna, with chicken or turkey, and spinach*
58130310	Lasagna, meatless*

Food	Food description
code	
58130320	Lasagna, meatless, with vegetables*
58131110	Ravioli, NS as to filling, with tomato sauce*
58131120	Ravioli, NS as to filling, with cream sauce*
58131310	Ravioli, meat-filled, no sauce*
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce*
58131330	Ravioli, meat-filled, with cream sauce*
58131510	Ravioli, cheese-filled, no sauce*
58131520	Ravioli, cheese-filled, with tomato sauce*
58131523	Ravioli, cheese-filled, with tomato sauce, canned*
58131535	Ravioli, cheese-filled, with cream sauce*
58131590	Ravioli, cheese and spinach-filled, no sauce*
58131600	Ravioli, cheese and spinach-filled, with cream sauce* Ravioli, cheese and spinach filled, with tomato sauce*
58131610 58133120	Manicotti, cheese-filled, with tomato sauce, meatless*
58133120	Stuffed shells, cheese-filled, with tomato sauce, meatless*
58134120	Stuffed shells, cheese-filled, with meat sauce*
58134150	Stuffed shells, cheese- and spinach- filled, no sauce*
58134610	Tortellini, meat-filled, with tomato sauce*
58134613	Tortellini, meat-filled, with tomato sauce, canned*
58134620	Tortellini, cheese-filled, meatless, with tomato sauce*
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing*
58134650	Tortellini, meat-filled, no sauce*
58134660	Tortellini, cheese-filled, with cream sauce*
58134680	Tortellini, cheese-filled, no sauce*
58134710	Tortellini, spinach-filled, with tomato sauce*
58134720	Tortellini, spinach-filled, no sauce*
58146120	Pasta with tomato-based sauce, cheese and meat*
58146150	Pasta with tomato-based sauce and cheese*
58146381	Pasta with cream sauce, restaurant*
58146382	Pasta with cream sauce, home recipe*
58146383	Pasta with cream sauce, ready-to-heat*
58146391	Pasta with cream sauce and added vegetables, restaurant*
58146392	Pasta with cream sauce and added vegetables, from home recipe*
58146393	Pasta with cream sauce and added vegetables, ready-to-heat*
58146401	Pasta with cream sauce and meat, restaurant*
58146402	Pasta with cream sauce and meat, home recipe*
58146403	Pasta with cream sauce and meat, ready-to-heat*
58146411	Pasta with cream sauce, meat, and added vegetables, restaurant*
58146412	Pasta with cream sauce, meat, and added vegetables, home recipe*
58146413	Pasta with cream sauce, meat, and added vegetables, ready-to-heat*
58146421	Pasta with cream sauce and poultry, restaurant*
58146422	Pasta with cream sauce and poultry, home recipe*
58146423	Pasta with cream sauce and poultry, ready-to-heat*
58146431	Pasta with cream sauce, poultry, and added vegetables, restaurant*
58146432	Pasta with cream sauce, poultry, and added vegetables, home recipe*
58146433	Pasta with cream sauce, poultry, and added vegetables, ready-to-heat*

Food	Food description
code	
58146441	Pasta with cream sauce and seafood, restaurant*
58146442	Pasta with cream sauce and seafood, home recipe*
58146443	Pasta with cream sauce and seafood, ready-to-heat*
58146451	Pasta with cream sauce, seafood, and added vegetables, restaurant*
58146452	Pasta with cream sauce, seafood, and added vegetables, home recipe*
58146682	Pasta, whole grain, with cream sauce, home recipe*
58146683	Pasta, whole grain, with cream sauce, ready-to-heat*
58146692	Pasta, whole grain, with cream sauce, and added vegetables, home recipe*
58146693	Pasta, whole grain, with cream sauce, and added vegetables, ready-to-heat*
58146702	Pasta, whole grain, with cream sauce and meat, home recipe*
58146713	Pasta, whole grain, with cream sauce, meat, and added vegetables, ready-to-heat*
58146722	Pasta, whole grain, with cream sauce and poultry, home recipe*
58146723	Pasta, whole grain, with cream sauce and poultry, ready-to-heat*
58146732	Pasta, whole grain, with cream sauce, poultry, and added vegetables, home recipe*
58146733	Pasta, whole grain, with cream sauce, poultry, and added vegetables, ready-to-heat*
58146741	Pasta, whole grain, with cream sauce and seafood, restaurant*
58148180	Macaroni or pasta salad with cheese*
58162090	Stuffed pepper, with meat*
58162110	Stuffed pepper, with rice and meat*
58162120	Stuffed pepper, with rice, meatless*
58163330	Flavored rice mixture with cheese*
58200250	Wrap sandwich, filled with vegetables*
58301050	Lasagna with cheese and meat sauce, diet frozen meal*
58301110	Vegetable lasagna, frozen meal*
58302050	Beef and noodles with meat sauce and cheese, diet frozen meal*
58302080	Noodles with vegetables in tomato-based sauce, diet frozen meal*
58303100	Rice, with broccoli, cheese sauce, frozen side dish*
58304010	Spaghetti and meatballs dinner, NFS, frozen meal*
58304060	Spaghetti with meat sauce, diet frozen meal*
58304200	Ravioli, cheese-filled, with tomato sauce, diet frozen meal*
58306020	Beef enchilada, chili gravy, rice, refried beans, frozen meal*
58306070	Cheese enchilada, frozen meal*
58306100	Chicken enchilada, diet frozen meal*
71305030	Potato, scalloped, from fresh*
71305040	Potato, scalloped, from fresh, with meat*
71405019	Potato, hash brown, from fresh, with cheese*
71501011	Potato, mashed, from fresh, made with milk, with cheese*
71507020	Potato, baked, peel not eaten, with cheese*
71507025	Potato, baked, peel not eaten, with meat*
71507030	Potato, baked, peel not eaten, with chili*
71507035	Potato, baked, peel not eaten, with vegetables*
71508020	Potato, baked, peel eaten, with cheese*
71508025	Potato, baked, peel eaten, with meat*
71508030	Potato, baked, peel eaten, with chili*
71508035	Potato, baked, peel eaten, with vegetables*
72116150	Caesar salad, with romaine, no dressing*

Food	Food description
code	
72125260	Spinach and cheese casserole*
72125310	
72202020	
75140500	
75143200	· · · · · · · · · · · · · · · · · · ·
75143350	Lettuce, salad with egg, cheese, tomato, and/or carrots, with or without other vegetables, no
7514/000	dressing*
75146000	Greek Salad, no dressing*
75410500	Chiles relienes, cheese-filled*
75410530	Chiles rellenos, filled with meat and cheese*
75410550	Stuffed jalapeno pepper*
75412060 75412070	
75412070	
75414020	
76102030	
77316600	Eggplant and meat casserole*
91501050	Gelatin dessert with cream cheese*
	Id confections
91700010	
91700500	5
91701010	
91701020	
91702010	
91703010	Caramel, chocolate-flavored roll
91703020	Caramel, flavor other than chocolate
91703030	Caramel, with nuts
91703040	Caramel candy, chocolate covered
91703050	Caramel with nuts and cereal, chocolate covered
91703060	Caramel with nuts, chocolate covered
91703070	Rolo
91703080	Caramel, all flavors, sugar free
91703150	Toblerone, milk chocolate with honey and almond nougat
91703200	TWIX Caramel Cookie Bars
91703250	TWIX Chocolate Fudge Cookie Bars
91703400	Whatchamacallit
91703500	Nuts, carob-coated
91703600 91705010	Espresso coffee beans, chocolate-covered Milk chocolate candy, plain
91705010	Milk chocolate candy, with cereal
91705020	Kit Kat
91705040	Chocolate, milk, with nuts, not almond or peanuts
91705050	Milk chocolate candy, with fruit and nuts
91705060	Milk chocolate candy, with almonds
91705070	Chocolate, milk, with peanuts
91705090	Chocolate candy with fondant and caramel
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Food	Food description
code	
91705200	Chocolate, semi-sweet morsel
91705300	Chocolate, sweet or dark
91705310	Chocolate, sweet or dark, with almonds
91705400	Chocolate, white
91705410	Chocolate, white, with almonds
91705420	Chocolate, white, with cereal
91705430	Kit Kat White
91705500	Mexican chocolate, tablet
91706000	Coconut candy, chocolate covered
91706100	Coconut candy, no chocolate covering
91707000	Fondant
91707010	Fondant, chocolate covered
91708000	Fruit peel, candied
91708010	Date candy
91708020	Soft fruit confections
91708030	Fruit leather and fruit snacks candy
91708070	Tamarind candy
91708100	Fruit snacks candy, with high vitamin C
91708150	Yogurt covered fruit snacks candy, with added vitamin C
91709000	Gumdrops, chocolate covered
91713030	Fudge, chocolate
91713040	Fudge, chocolate, with nuts
91713050	Fudge, peanut butter
91713070	Fudge, vanilla
91715100	SNICKERS Bar
91715200	Baby Ruth
91715300	100 GRAND Bar
91716010	Halvah, plain
91718000	Honey-combed hard candy with peanut butter
91718100	Butterfinger
91718110	Butterfinger Crisp
91718200	Chocolate-flavored sprinkles
91718300	Ladoo, round ball, Asian-Indian dessert
91721000	Licorice
91723000	Marshmallow
91723010	Marshmallow, chocolate covered
91723020	Marshmallow, candy-coated
91726000	Nougat, plain
91726130	
91726140	MILKY WAY MIDNIGHT Bar
91726150	MARS Almond Bar
91726410	Nougat, chocolate covered
91726420	3 MUSKETEERS Bar
91727010	Nuts, chocolate covered, not almonds or peanuts
91728000 91728500	Nut roll, fudge or nougat, caramel and nuts
71/20000	Sugared pecans, sugar and egg white coating

Food	Food description
code	
91731000	Peanuts, chocolate covered
91731010	M&M's Peanut Chocolate Candies
91731060	M&M's Peanut Butter Chocolate Candies
91731100	Peanuts, sugar-coated
91731150	Peanuts, yogurt covered
91732000	Peanut bar
91733000	Peanut brittle
91733200	Peanut Bar, chocolate covered candy
91734000	Peanut butter, chocolate covered
91734100	Reese's Peanut Butter Cup
91734200	Reese's Pieces
91734300	Reese's Sticks
91734400	Reese's Fast Break
91734450	Reese's Crispy Crunchy Bar
91734500	Peanut butter morsels
91735000	Pralines
91736000	Pineapple candy, Puerto Rican style
91739010	Raisins, chocolate covered
91739600	Raisins, yogurt covered
91742010	Sesame Crunch, Sahadi
91745010	Gumdrops
91745020	Hard candy
91745040	Butterscotch hard candy
91745100	Skittles
91746100	M&M's Milk Chocolate Candies
91746120	Sixlets
91746150	Easter egg, candy coated chocolate
91746200	M&M's Pretzel Chocolate Candies
91750000	Taffy
91760000	Toffee, plain
91760100	Toffee, chocolate covered
91760200	Toffee, chocolate-coated, with nuts
91760500	Truffles
91770010	Dietetic or low calorie gumdrops
91770020	Dietetic or low calorie hard candy
91770030	Dietetic or low calorie candy, chocolate covered
91800100	Chewing gum, NFS
91801000	Chewing gum, regular
91802000	Chewing gum, sugar free
Coatings a	nd Breadings for meat, poultry, and vegetables
21003000	Beef, NS as to cut, fried, NS to fat eaten*
21102110	Beef steak, fried, NS as to fat eaten*
21102120	Beef steak, fried, lean and fat eaten*
21102130	Beef steak, fried, lean only eaten*
21103110	Beef steak, breaded or floured, baked or fried, NS as to fat eaten*
21103120	Beef steak, breaded or floured, baked or fried, lean and fat eaten*

Food	Food description
code 21103130	Beef steak, breaded or floured, baked or fried, lean only eaten*
21103130	Beef steak, battered, fried, NS as to fat eaten*
21104110	Beef steak, battered, fried, lean only eaten*
22000200	Pork, NS as to cut, fried, NS as to fat eaten*
22000200	Pork, NS as to cut, fried, lean and fat eaten*
22000210	Pork, NS as to cut, fried, lean only eaten*
22000300	Pork, NS as to cut, breaded or floured, fried, NS as to fat eaten*
22000320	Pork, NS as to cut, breaded or floured, fried, lean only eaten*
22101140	Pork chop, breaded or floured, broiled or baked, lean and fat eaten*
22101150	Pork chop, breaded or floured, broiled or baked, lean only eaten*
22101200	Pork chop, fried, NS as to fat eaten*
22101210	Pork chop, fried, lean and fat eaten*
22101220	Pork chop, fried, lean only eaten*
22101300	Pork chop, breaded or floured, fried, NS as to fat eaten*
22101310	Pork chop, breaded or floured, fried, lean and fat eaten*
22101320	Pork chop, breaded or floured, fried, lean only eaten*
22101410	Pork chop, battered, fried, lean and fat eaten*
22101420	Pork chop, battered, fried, lean only eaten*
22201050	Pork steak or cutlet, battered, fried, NS as to fat eaten*
22201060	Pork steak or cutlet, battered, fried, lean and fat eaten*
22201070	Pork steak or cutlet, battered, fried, lean only eaten*
22201210	Pork steak or cutlet, fried, lean and fat eaten*
22201220	Pork steak or cutlet, fried, lean only eaten*
22201320	Pork steak or cutlet, breaded or floured, broiled or baked, lean only eaten*
22201410	Pork steak or cutlet, breaded or floured, fried, lean and fat eaten*
22201420	Pork steak or cutlet, breaded or floured, fried, lean only eaten*
22210310	Pork, tenderloin, breaded, fried*
22300120	Ham, fried, NS as to fat eaten*
22300130	Ham, fried, lean and fat eaten*
22300140	Ham, fried, lean only eaten*
22300150	Ham, breaded or floured, fried, NS as to fat eaten*
22300160	Ham, breaded or floured, fried, lean and fat eaten*
22431000 23150200	Pork roll, cured, fried* Goat, fried*
23203030	Veal chop, fried, lean only eaten*
23205030	Veal cutlet or steak, fried, lean and fat eaten*
23205020	Veal cutlet or steak, fried, lean only eaten*
232203030	Veal patty, breaded, cooked*
23321250	Venison/deer steak, breaded or floured, cooked, NS as to cooking method*
24107070	Chicken, NS as to part, fried, coated, skin / coating eaten*
24107080	Chicken, NS as to part, baked, coated, skin / coating eaten*
24127200	Chicken breast, fried, coated, skin / coating eaten, from raw*
24127202	Chicken breast, fried, coated, prepared skinless, coating eaten, from raw*
24127210	Chicken breast, fried, coated, skin / coating eaten, from pre-cooked*
24127220	Chicken breast, fried, coated, skin / coating eaten, from fast food / restaurant*
24127500	Chicken breast, baked, coated, skin / coating eaten*

Food	Food description
cod e 24137300	Chicken leg, drumstick and thigh, fried, coated, skin / coating eaten *
24137310	Chicken leg, drumstick and thigh, baked, coated, skin / coating eaten*
24147300	Chicken drumstick, fried, coated, skin / coating eaten, from raw*
24147302	Chicken drumstick, fried, coated, prepared skinless, coating eaten, from raw*
24147310	Chicken drumstick, fried, coated, skin / coating eaten, from pre-cooked*
24147320	Chicken drumstick, fried, coated, skin / coating eaten, from fast food / restaurant*
24147400	Chicken drumstick, baked, coated, skin / coating eaten*
24157300	Chicken thigh, fried, coated, skin / coating eaten, from raw*
24157302	Chicken thigh, fried, coated, prepared skinless, coating eaten, from raw*
24157310	Chicken thigh, fried, coated, skin / coating eaten, from pre-cooked*
24157320	Chicken thigh, fried, coated, skin / coating eaten, from fast food*
24157330	Chicken thigh, fried, coated, skin / coating eaten, from restaurant*
24157400	Chicken thigh, baked, coated, skin / coating eaten*
24167200	Chicken wing, fried, coated, from raw*
24167210	Chicken wing, fried, coated, from pre-cooked*
24167220	Chicken wing, fried, coated, from fast food*
24167230	Chicken wing, fried, coated, from restaurant*
24167300	Chicken wing, baked, coated*
24168002	Chicken "wings", plain, from fast food / restaurant*
24168012	Chicken "wings", plain, from precooked*
24168022	Chicken "wings", plain, from other sources*
24168030	Chicken "wings", boneless, with hot sauce, from fast food / restaurant*
24168031	Chicken "wings", boneless, with hot sauce, from other sources*
24198671	Chicken patty, breaded*
24198677	Chicken fillet, breaded*
24198683	Chicken fillet, grilled*
24198729	Chicken nuggets, NFS*
24198731	Chicken nuggets, from fast food*
24198732	Chicken nuggets, from restaurant*
24198735	Chicken nuggets, from school lunch*
24198736 24198737	Chicken nuggets, from frozen*
24198737	Chicken nuggets, from other sources* Chicken tenders or strips, NFS*
24198739	Chicken tenders or strips, breaded, from fast food*
24198742	Chicken tenders or strips, breaded, from restaurant*
24198745	Chicken tenders or strips, breaded, from school lunch*
24198746	Chicken tenders or strips, breaded, from frozen*
24198747	Chicken tenders or strips, breaded, from other sources*
24201370	Turkey, light or dark meat, fried, coated, skin eaten*
24208000	Turkey, nuggets*
24301210	Duck, coated, fried*
25110140	Beef liver, fried*
25110450	Chicken liver, fried*
26100130	Fish, NS as to type, coated, baked or broiled, made with oil*
26100133	Fish, NS as to type, coated, baked or broiled, no added fat*
26100140	Fish, NS as to type, coated, fried, made with oil*

Food	Food description
code	Fish NC so to true, costed fried mede with recordering*
26100142	Fish, NS as to type, coated, fried, made with margarine*
26105140	Carp, coated, fried*
26107110	Catfish, cooked, NS as to cooking method*
26107130	Catfish, coated, baked or broiled, made with oil*
26107131	Catfish, coated, baked or broiled, made with butter*
26107133	Catfish, coated, baked or broiled, no added fat*
26107140	Catfish, coated, fried, made with oil*
26107143	Catfish, coated, fried, no added fat*
26107144	Catfish, coated, fried, made with cooking spray*
26109130	Cod, coated, baked or broiled, made with oil*
26109133	Cod, coated, baked or broiled, no added fat*
26109134	Cod, coated, baked or broiled, made with cooking spray*
26109140	Cod, coated, fried, made with oil*
26109141	Cod, coated, fried, made with butter*
26109144	Cod, coated, fried, made with cooking spray*
26111140 26115130	Croaker, coated, fried* Flounder, coated, baked or broiled, made with oil*
26115130	Flounder, coated, fried, made with oil*
26117130	Haddock, coated, baked or broiled, fat added*
26117130	Haddock, coated, baked or broiled, no added fat*
26117131	Haddock, coated, fried*
26118030	Halibut, coated, baked or broiled, made with oil*
26119130	Herring, coated, baked or broiled, fat added*
26119130	Herring, coated, fried*
26121140	Mackerel, coated, fried*
26127110	Perch, cooked, NS as to cooking method*
26127130	Perch, coated, baked or broiled, made with oil*
26127140	Perch, coated, fried, made with oil*
26127143	Perch, coated, fried, no added fat*
26131131	Pompano, coated, baked or broiled, no added fat*
26131140	Pompano, coated, fried*
26133130	Porgy, coated, baked or broiled, fat added*
26133140	Porgy, coated, fried*
26137130	Salmon, coated, baked or broiled, made with oil*
26137131	Salmon, coated, baked or broiled, made with butter*
26137133	Salmon, coated, baked or broiled, no added fat*
26137134	Salmon, coated, baked or broiled, made with cooking spray*
26137140	Salmon, coated, fried, made with oil*
26137141	Salmon, coated, fried, made with butter*
26137142	Salmon, coated, fried, made with margarine*
26137143	Salmon, coated, fried, no added fat*
26141130	Sea bass, coated, baked or broiled, fat added*
26141140	Sea bass, coated, fried*
26151130	Trout, coated, baked or broiled, made with oil*
26151133	Trout, coated, baked or broiled, no added fat*
26151140	Trout, coated, fried, made with oil*

Food	Food description
code	—
26151142	Trout, coated, fried, made with margarine*
26153131	Tuna, fresh, coated, baked or broiled, no added fat*
26157110	Whiting, cooked, NS as to cooking method*
26157132	Whiting, coated, baked or broiled, made with margarine*
26157133	Whiting, coated, baked or broiled, no added fat*
26157140	Whiting, coated, fried, made with oil*
26158020	Tilapia, coated, baked or broiled, made with oil*
26158021	Tilapia, coated, baked or broiled, made with butter*
26158023	Tilapia, coated, baked or broiled, no added fat*
26158024	Tilapia, coated, baked or broiled, made with cooking spray*
26158030	Tilapia, coated, fried, made with oil*
26158031	Tilapia, coated, fried, made with butter*
26158032	Tilapia, coated, fried, made with margarine*
26158033	Tilapia, coated, fried, no added fat*
26158034	Tilapia, coated, fried, made with cooking spray*
26203110	Frog legs, NS as to cooking method*
26205110	Octopus, cooked, NS as to cooking method*
26213140	Squid, coated, fried*
26303140	Clams, coated, fried*
26305130	Crab, coated, baked or broiled, fat added*
26307140	Crab, soft shell, coated, fried*
26309140	Crayfish, coated, fried*
26311140	Lobster, coated, fried*
26315110	Oysters, cooked, NS as to cooking method*
26315140	Oysters, coated, fried*
26317140	Scallops, coated, fried*
26319110	Shrimp, cooked, NS as to cooking method*
26319140	Shrimp, coated, fried, made with oil*
26319143	Shrimp, coated, fried, no added fat*
26319145	Shrimp, coated, fried, from fast food / restaurant*
26319160	Shrimp, coated, baked or broiled, made with oil*
26319161	Shrimp, coated, baked or broiled, made with butter*
26319163	Shrimp, coated, baked or broiled, no added fat*
27120060 27135110	Sweet and sour pork*
	Veal parmigiana*
27146250 27146300	Chicken or turkey cordon bleu* Chicken or turkey parmigiana*
	Sweet and sour shrimp*
27150170 27220080	
27246300	Ham croquette* Chicken or turkey cake, patty, or croquette*
	Crab cake*
27250040 27250070	Salmon cake or patty*
27250070	Tuna cake or patty*
27250100	Shrimp cake or patty*
27260050	Meatballs, with breading, NS as to type of meat, with gravy*
27200050	Stir fried beef and vegetables in soy sauce*
2/410400	Sui men deel and vegetadies in suy sauce

Food code	Food description
27446320	Chicken or turkey, breaded, fried, garden salad with bacon and cheese, chicken and/or turkey,
27110020	bacon, cheese, lettuce and/or greens, tomato and/or carrots, other vegetables, no dressing*
27446362	Chicken or turkey, breaded, fried, caesar garden salad, chicken and/or turkey, lettuce, tomatoes,
	cheese, no dressing*
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll*
27520166	Bacon, breaded fried chicken fillet, and tomato club sandwich with cheese, lettuce and spread*
27540140	Chicken fillet, breaded, fried, sandwich*
27540146	Chicken fillet sandwich, fried, from fast food*
27540147	Chicken fillet sandwich, fried, from fast food, with cheese*
27540150	Chicken fillet, breaded, fried, sandwich with lettuce, tomato and spread* Chicken fillet, breaded, fried, sandwich with cheese, lettuce, tomato and spread*
27540151 27540160	Chicken fillet sandwich, NS as to fried or grilled, from fast food*
27540100	Chicken fillet sandwich, fried, on white bun*
27540175	Chicken fillet sandwich, fried, on white bun; with cheese*
27540185	Chicken fillet sandwich, fried, on wheat bun*
27540186	Chicken fillet sandwich, fried, on wheat bun, with cheese*
27540210	Chicken fillet wrap sandwich, fried, from fast food*
27550000	Fish sandwich, fried, from fast food*
27550100	Fish sandwich, fried, from fast food, with cheese*
27550150	Fried seafood sandwich*
27550200	Fish sandwich, from school cafeteria*
27550300	Fish sandwich, NFS*
27550400	Fish sandwich, fried, on white bun*
27550405	Fish sandwich, fried, on white bun, with cheese*
27550410	Fish sandwich, fried, on wheat bun*
27560300 28140710	Corn dog, frankfurter or hot dog with cornbread coating* Chicken, fried, with potatoes, vegetable, frozen meal*
28140710	Chicken patty, or nuggets, boneless, breaded, potatoes, vegetable, frozen meal*
28140720	Chicken patty or nuggets, boneless, breaded, with pasta and tomato sauce, fruit, dessert, frozen
20110710	meal*
28140810	Chicken, fried, with potatoes, vegetable, dessert, frozen meal*
28141010	Chicken, fried, with potatoes, vegetable, dessert, frozen meal, large meat portion*
28141050	Chicken patty parmigiana, breaded, with vegetable, diet frozen meal*
71901110	Fried green plantain, Puerto Rican style*
71905120	Plantain, ripe, rolled in flour, fried*
71910210	Green banana, fried*
71930190	Yuca fries*
72202030	Fried broccoli*
73304010	Squash fritter or cake*
73410200	Sweet potato fries, NFS* Sweet potato fries, NS as to fresh or frozen*
73410300 73410310	Sweet potato fries, frozen, fried*
73410310	Sweet potato fries, frozen, baked*
73410320	Sweet potato fries, from fresh, fried*
73410340	Sweet potato fries, from fresh, baked*
73410400	Sweet potato fries, fast food / restaurant*
	-

Food	Food description
code	
73410500	Sweet potato fries, school*
73420000	Sweet potato tots, NFS*
73420020	Sweet potato tots, from frozen, baked*
73420200	Sweet potato tots, school*
74202051	Tomatoes, red, from fresh, fried*
74205010	Fried green tomatoes*
75205200	Fried green beans*
75409020	Fried cauliflower* Corn fritter*
75411020	
75412010 75414030	Fried eggplant* Fried mushrooms*
75414030	Fried okra*
75414500	
75415020	Onion rings, NS as to form, batter-dipped, baked or fried* Fried onion rings*
75415022	Fried Summer squash, yellow or green*
75440200	Vegetable tempura*
75440200	Pakora*
75511300	Pickles, fried*
77205110	Ripe plantain fritters, Puerto Rican style*
	buddings, and gelatin desserts
13200110	Pudding, chocolate, NFS
13210110	Pudding, bread
13210180	Pudding, Mexican bread
13210220	Pudding, chocolate, NS as to from dry mix or ready-to-eat
13210250	Pudding, chocolate, low calorie, containing artificial sweetener, NS as to from dry mix or ready-to-eat
13210270	Custard, Puerto Rican style
13210280	Pudding, flavors other than chocolate, NFS
13210290	Pudding, flavors other than chocolate, low calorie, containing artificial sweetener, NS as to from dry
	mix or ready-to-eat
13210300	Custard
13210350	Flan
13210370	Creme brulee
13210410	Pudding, rice
13210450	Firni, Indian pudding
13210500	Pudding, tapioca, made from home recipe, made with milk
13210520	Pudding, tapioca, made from dry mix
13210810	Pumpkin pudding, Puerto Rican style
13220110	Pudding, flavors other than chocolate, made from dry mix
13220120	Pudding, chocolate, made from dry mix
13220210	Pudding, flavors other than chocolate, made from dry mix, sugar free
13220220	Pudding, chocolate, made from dry mix, sugar free
13220235	Pudding, ready-to-eat, chocolate, fat free
13230110	Pudding, flavors other than chocolate, ready-to-eat
13230120	Pudding, flavors other than chocolate, ready-to-eat, sugar free
13230130	Pudding, chocolate, ready-to-eat
13230140	Pudding, chocolate, ready-to-eat, sugar free

Food	Food description
code	
13230200	Pudding, ready-to-eat, chocolate and non-chocolate flavors combined
13230500	Pudding, tapioca, ready-to-eat
13241000	Banana pudding
13250000	Mousse
13252200	Milk dessert or milk candy, Puerto Rican style
13252500	Barfi or Burfi, Indian dessert
13252590	Trifle*
14610200	Cheese, cottage cheese, with gelatin dessert*
32401000	Meringues
53344200	Mixed fruit tart filled with custard or cream cheese*
53420000	Cream puff, eclair, custard or cream filled, NS as to icing*
53420100	Cream puff, eclair, custard or cream filled, not iced*
53420200	Cream puff, eclair, custard or cream filled, iced*
53452420	Pastry, puff, custard or cream filled, iced or not iced*
53521210	Doughnut, custard-filled*
53521230	Doughnut, custard-filled, with icing*
58157210	Rice pudding made with coconut milk, Puerto Rican style
63402990	Fruit salad, including citrus fruits, with pudding*
63403000	Fruit salad, excluding citrus fruits, with pudding*
63403100	Fruit dessert with cream and/or pudding and nuts*
91501010	Gelatin dessert
91501020 91501030	Gelatin dessert with fruit
91501050	Gelatin dessert with whipped cream* Gelatin dessert with cream cheese*
91501050	Gelatin dessert with sour cream*
91501000	Gelatin dessert with fruit, vegetable, and nuts
91511010	Gelatin dessert, sugar free
91511020	Gelatin dessert, sugar free, with fruit
91511030	Gelatin dessert, dietetic, with whipped topping, sweetened with low calorie sweetener*
91511060	Gelatin dessert, dietetic, with sour cream, sweetened with low calorie sweetener*
91550300	Pineapple custard, Puerto Rican style
91560100	Haupia
Dairy produ	•
12100100	Cream, NS as to light, heavy, or half and half
12110100	Cream, light
12120100	Cream, half and half
12120106	Cream, half and half, flavored
12120110	Cream, half and half, fat free
12130100	Cream, heavy
12140000	Cream, whipped
12200100	Coffee creamer, NFS
12210200	Coffee creamer, liquid
12210210	Coffee creamer, liquid, flavored
12210260	Coffee creamer, liquid, fat free
12210270	Coffee creamer, liquid, fat free, flavored
12210280	Coffee creamer, liquid, fat free, sugar free, flavored

Food	Food description
code	·
12210310	Coffee creamer, liquid, sugar free, flavored
12210400	Coffee creamer, powder
12210420	Coffee creamer, powder, flavored
12210430	Coffee creamer, powder, fat free
12210440	Coffee creamer, powder, fat free, flavored
12210505	Coffee creamer,powder, sugar free, flavored
12220200	Whipped topping
12220270	Whipped topping, fat free
12220280	Whipped topping, sugar free
12310100	Sour cream, regular
12310300	Sour cream, reduced fat
12310350	Sour cream, light
12310370	Sour cream, fat free
13252590	Trifle*
13252600	Tiramisu*
27113100	Beef stroganoff*
27120080	Ham stroganoff*
27150060	Lobster newburg*
27212350	Beef stroganoff with noodles*
27443150	Chicken or turkey divan*
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert, frozen meal*
28110390	Salisbury steak, potatoes, vegetable, dessert, diet frozen meal*
28110660	Meatballs, Swedish, in gravy, with noodles, diet frozen meal*
28140100	Chicken dinner, NFS, frozen meal*
28141010	Chicken, fried, with potatoes, vegetable, dessert, frozen meal, large meat portion*
41812400	Vegetarian pot pie*
41812850	Vegetarian stroganoff*
53122070	Cake, shortcake, biscuit type, with whipped cream and fruit*
53123070	Cake, shortcake, sponge type, with whipped cream and fruit*
56202900	Oatmeal, from fast food, plain*
56202905	Oatmeal, from fast food, maple flavored* Oatmeal, from fast food, fruit flavored*
56202910	Oatmeal, from fast food, other flavored
56202920 58100135	Burrito with meat and sour cream*
58100135	Burrito with meat, beans, and sour cream*
58100140	Burrito with meat, beans, and sour cream, from fast food*
58100145	Burrito with meat, beans, rice, and sour cream*
58100105	Burrito with chicken and sour cream*
58100235	Burrito with chicken, beans, and sour cream*
58100245	Burrito with chicken, beans, rice, and sour cream*
58100200	Burrito with beans, rice, and sour cream, meatless*
58101325	Taco or tostada with meat and sour cream*
58101350	Soft taco with meat and sour cream*
58101357	Soft taco with meat and sour cream, from fast food*
58101460	Soft taco with chicken and sour cream*
58101525	Taco or tostada with chicken and sour cream*
30101020	

Food	Food description
code	
58101615	Soft taco with beans and sour cream*
58101630	Soft taco with meat, beans, and sour cream*
58101635	Soft taco with chicken, beans, and sour cream*
58101725	Taco or tostada with beans and sour cream*
58101745	Taco or tostada with meat, beans, and sour cream*
58101750	Taco or tostada with chicken, beans, and sour cream*
58101945	Taco or tostada salad with meat and sour cream*
58101950	Taco or tostada salad with chicken and sour cream*
58101955	Taco or tostada salad, meatless with sour cream*
58104090	Nachos with cheese and sour cream*
58104180	Nachos with meat, cheese, and sour cream*
58104190	Nachos with chicken, cheese, and sour cream*
58104270	Gordita, sope, or chalupa with beans and sour cream*
58104280	Gordita, sope, or chalupa with meat and sour cream*
58104320	Gordita, sope, or chalupa with chicken and sour cream*
58104535	Chimichanga with meat and sour cream*
58104550	Chimichanga with chicken and sour cream*
58105000	Fajita with chicken and vegetables*
58105050	Fajita with meat and vegetables*
58105075	Fajita with vegetables*
58125180	Cheese quiche, meatless*
58127150	Vegetables and cheese in pastry*
58301110	Vegetable lasagna, frozen meal*
58306100	Chicken enchilada, diet frozen meal*
63101310	Apple, baked*
63107410	Banana, fried*
63402960	Fruit salad, excluding citrus fruits, with whipped cream*
63402970	Fruit salad, excluding citrus fruits, with nondairy whipped topping*
63403020	Fruit salad, including citrus fruit, with whipped cream*
63403100	Fruit dessert with cream and/or pudding and nuts*
71501010	Potato, mashed, from fresh, made with milk*
71501011	Potato, mashed, from fresh, made with milk, with cheese*
71501012	Potato, mashed, from fresh, made with milk, with gravy*
71501013	Potato, mashed, from fresh, NFS*
71507010	Potato, baked, peel not eaten, with sour cream*
71507020	Potato, baked, peel not eaten, with cheese*
71507025	Potato, baked, peel not eaten, with meat*
71508010	Potato, baked, peel eaten, with sour cream*
71508020	Potato, baked, peel eaten, with cheese*
71508025	Potato, baked, peel eaten, with meat*
71702000	Potato pudding*
72202010	Broccoli casserole with noodles*
73409000	Sweet potato, casserole or mashed*
74203010	Tomatoes, scalloped*
75142500	Cucumber salad, made with sour cream dressing*
76102030	Broccoli, carrots and cheese, baby food, junior*

Food	Food description
code	
91361020	Fruit sauce*
91501030	Gelatin dessert with whipped cream*
91501060	Gelatin dessert with sour cream*
91511030	Gelatin dessert, dietetic, with whipped topping, sweetened with low calorie sweetener*
91511060	Gelatin dessert, dietetic, with sour cream, sweetened with low calorie sweetener*
92101925	Frozen coffee drink, with whipped cream*
92101926	Frozen coffee drink, nonfat, with whipped cream*
92101935	Frozen coffee drink, decaffeinated, with whipped cream*
92102030	Frozen mocha coffee drink, with whipped cream*
92102040	Frozen mocha coffee drink, nonfat, with whipped cream*
92102050	Frozen mocha coffee drink, with non-dairy milk and whipped cream*
92102450	Iced Coffee, pre-lightened and pre-sweetened*
92121000	Coffee, instant, pre-lightened and pre-sweetened with sugar, reconstituted*
92121001	Coffee, instant, decaffeinated, pre-lightened and pre-sweetened with sugar, reconsitituted*
92121020	Coffee, mocha, instant, pre-lightened and pre-sweetened with sugar, reconstituted*
92121040	Coffee, instant, pre-lightened and pre-sweetened with low calorie sweetener, reconstituted*
92121041	Coffee, instant, decaffeinated, pre-lightened and pre-sweetened with low calorie sweetener,
	reconstituted*
92130000	Coffee, pre-lightened and pre-sweetened with sugar*
92130005	Coffee, pre-lightened and pre-sweetened with low calorie sweetener*
92130010	Coffee, pre-lightened*
92130011	Coffee, decaffeinated, pre-lightened*
93301010	Alexander*
93301250	White Russian*
93301400	Irish Coffee*
Dips	
11440010	Chipotle dip, yogurt based
11440020	Dill dip, yogurt based
11440040	Ranch dip, yogurt based
11440050	Spinach dip, yogurt based
11440060	Tzatziki dip
11440070	Vegetable dip, yogurt based
12350010	Dip, NFS
12350200	Chipotle dip, regular
12350210	Dill dip, regular
12350220	Onion dip, regular
12350225	Onion dip, light
12350230	Ranch dip, regular
12350235	Ranch dip, light
12350240	Spinach dip, regular
12350245	Spinach dip, light
12350250	Vegetable dip, regular
12350255	Vegetable dip, light
14620110	Artichoke dip
14620115	Spinach and artichoke dip
14620130	Seafood dip

Food	Food description
code	
14620150	Cheese dip with chili pepper
14620200	Cheese dip
32105180	Huevos rancheros*
41205050	Bean dip, made with refried beans
41205055	Layer dip
41205070	Hummus, plain
41205075	Hummus, flavored
58100000	Burrito, taco, or quesadilla with egg*
58100005	Burrito, taco, or quesadilla with egg and potato*
58100010	Burrito, taco, or quesadilla with egg and breakfast meat*
58100015	Burrito, taco, or quesadilla with egg, potato, and breakfast meat*
58100017	Burrito, taco, or quesadilla with egg, potato, and breakfast meat, from fast food*
58100020	Burrito, taco, or quesadilla with egg, beans, and breakfast meat*
58100100	Burrito with meat*
58100120	Burrito with meat and beans*
58100135	Burrito with meat and sour cream*
58100140	Burrito with meat, beans, and sour cream*
58100160	Burrito with meat, beans, and rice*
58100165	Burrito with meat, beans, rice, and sour cream*
58100200	Burrito with chicken*
58100220	Burrito with chicken and beans*
58100235	Burrito with chicken and sour cream*
58100245	Burrito with chicken, beans, and sour cream*
58100255	Burrito with chicken, beans, and rice*
58100260	Burrito with chicken, beans, rice, and sour cream*
58100300	Burrito with beans and rice, meatless*
58100320	Burrito with beans, meatless*
58100330	Burrito with beans, rice, and sour cream, meatless*
58101320	Taco or tostada with meat*
58101325	Taco or tostada with meat and sour cream*
58101345	Soft taco with meat*
58101350	Soft taco with meat and sour cream*
58101450	Soft taco with chicken*
58101460	Soft taco with chicken and sour cream* Taco or tostada with chicken*
58101520	Taco or tostada with chicken and sour cream*
58101525 58101540	Taco or tostada with fish*
58101540	Soft taco with fish*
58101610 58101615	Soft taco with beans* Soft taco with beans and sour cream*
58101615	Soft taco with meat and beans*
58101620	Soft taco with chicken and beans*
58101625	Soft taco with meat, beans, and sour cream*
58101630	Soft taco with chicken, beans, and sour cream*
58101035	Taco or tostada with beans*
58101720	Taco or tostada with beans and sour cream*
JUTUT723	Taco of tostada with dealts and soul creatil

Food	Food description
code	
58101730	Taco or tostada with meat and beans*
58101735	Taco or tostada with chicken and beans*
58101745	Taco or tostada with meat, beans, and sour cream*
58101750	Taco or tostada with chicken, beans, and sour cream*
58104090	Nachos with cheese and sour cream*
58104130	Nachos with meat and cheese*
58104150	Nachos with chicken and cheese*
58104190	Nachos with chicken, cheese, and sour cream*
58104260	Gordita, sope, or chalupa with beans*
58104270	Gordita, sope, or chalupa with beans and sour cream*
58104280	Gordita, sope, or chalupa with meat and sour cream*
58104290	Gordita, sope, or chalupa with meat*
58104320	Gordita, sope, or chalupa with chicken and sour cream*
58104340	Gordita, sope, or chalupa with chicken*
58104500	Chimichanga with meat*
58104520	Chimichanga, meatless*
58104530	Chimichanga with chicken*
58104535	Chimichanga with meat and sour cream*
58104550	Chimichanga with chicken and sour cream*
58104900	Taquito or flauta with egg*
58104905	Taquito or flauta with egg and breakfast meat*
58105000	Fajita with chicken and vegetables*
58105050	Fajita with meat and vegetables*
58105075	Fajita with vegetables*
63409010	Guacamole, NFS
63409015	Guacamole with tomatoes
74402100	Salsa, NFS
74402110	Salsa, pico de gallo
74402150	Salsa, red, commercially-prepared
74402200	Salsa, red, homemade
74402350	Salsa verde or salsa, green
75410550	Stuffed jalapeno pepper*
75412030	Eggplant dip
75506100	Honey mustard dip
91306020	Caramel dip, regular
91306025	Caramel dip, light
91306030	Chocolate dip
91306040	Dessert dip
Egg Produc	
14630200	Cheese souffle*
32105190	Egg casserole with bread, cheese, milk and meat*
32105200	Egg foo yung, NFS
32105210	Chicken egg foo yung
32105220	Pork egg foo yung
32105230	Shrimp egg foo yung
32105240	Beef egg foo yung

Food Food description code 33000990 Egg substitute, omelet, scrambled, or fried, NS as to fat added in cooking 33001010 Egg substitute, omelet, scrambled, or fried, fat added 33001020 Egg substitute, omelet, scrambled, or fried, made with butter 33001040 Egg substitute, omelet, scrambled, or fried, made with cooking spray 33001050 Egg substitute, omelet, scrambled, or fried, no added fat 33001200 Egg substitute, vegetable flavored, omelet, scrambled, or fried, fat added in cooking 33001210 Egg substitute, vegetable flavored, omelet, scrambled, or fried, fat not added in cooking 33401000 Egg substitute, omelet, scrambled, or fried, with cheese* 33401020 Egg substitute, omelet, scrambled, or fried, with cheese, NS as to fat added in cooking* 33401100 Egg substitute, omelet, scrambled, or fried, with meat 33401200 Egg substitute, omelet, scrambled, or fried, with vegetables 33401300 Egg substitute, omelet, scrambled, or fried, with cheese and meat* 33401310 Egg substitute, omelet, scrambled, or fried, with cheese and meat, fat not added in cooking* 33401400 Egg substitute, omelet, scrambled, or fried, with cheese and vegetables* 33401500 Egg substitute, omelet, scrambled, or fried, with meat and vegetables 33401600 Egg substitute, omelet, scrambled, or fried, with cheese, meat, and vegetables* 58125110 Quiche with meat, poultry or fish 58125120 Spinach quiche, meatless 58125180 Cheese guiche, meatless* Filling, baked goods 53100100 Cake or cupcake, NS as to type* 53101200 Cake, angel food, with icing or filling* 53101250 Cake, angel food, with fruit and icing or filling* 53102200 Cake or cupcake, applesauce, with icing or filling* 53102700 Cake or cupcake, banana, with icing or filling* 53104260 Cake or cupcake, carrot, with icing or filling* 53104400 Cake or cupcake, coconut, with icing or filling* 53105270 Cake or cupcake, chocolate, devil's food or fudge, with icing or filling* 53105300 Cake or cupcake, German chocolate, with icing or filling* 53108200 Snack cake, chocolate, with icing or filling* 53109200 Snack cake, not chocolate, with icing or filling* 53109220 Snack cake, not chocolate, with icing or filling, reduced fat and calories* 53111000 Cake or cupcake, gingerbread* 53114100 Cake or cupcake, lemon, with icing or filling* 53115200 Cake or cupcake, marble, with icing or filling* 53115320 Cake or cupcake, nut, with icing or filling* 53115410 Cake or cupcake, oatmeal* 53115450 Cake or cupcake, peanut butter* 53116020 Cake, pound, with icing or filling* 53116270 Cake, pound, chocolate* 53116510 Cake or cupcake, pumpkin, with icing or filling* 53117200 Cake or cupcake, spice, with icing or filling* 53118200 Cake, sponge, with icing or filling* 53118300 Cake, sponge, chocolate* 53120270 Cake or cupcake, white, with icing or filling* 53121270 Cake or cupcake, yellow, with icing or filling*

Food	Food description
cod e 53124110	Cake or europhe zuechini*
53124110	Cake or cupcake, zucchini*
53204100	Cookie, brownie, with icing or filling* Cookie, chocolate chip sandwich*
53200100	Cookie, chocolate chip sandwich Cookie, chocolate, with chocolate filling or coating, fat free*
53207050	Cookie, sugar wafer, chocolate-covered*
53209010	Cookie, chocolate, sandwich, with extra filling*
5320000	Cookie, fruit-filled bar*
53220030	Cookie, fig bar*
53220040	Cookie, fig bar, fat free*
53233010	Cookie, oatmeal, with raisins*
53233050	Cookie, oatmeal sandwich, with creme filling*
53233080	Cookie, oatmeal sandwich, with peanut butter and jelly filling*
53235500	Cookie, with peanut butter filling, chocolate-coated*
53237010	Cookie, raisin sandwich, cream-filled*
53238000	Cookie, sandwich-type, not chocolate or vanilla*
53239050	Cookie, shortbread, with icing or filling*
53244010	Cookie, butter or sugar, with chocolate icing or filling*
53244020	Cookie, butter or sugar, with icing or filling other than chocolate*
53300100	Pie, NFS*
53300170	Pie, individual size or tart, NFS*
53301000	Pie, apple, two crust*
53301070	Pie, apple, individual size or tart*
53301080	Pie, apple, fried pie*
53301500	Pie, apple, one crust*
53303000	Pie, blackberry, two crust*
53303500	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; two crust*
53303570	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry, individual size or tart*
53304000	Pie, blueberry, two crust*
53304050	Pie, blueberry, one crust*
53305000	Pie, cherry, two crust*
53305010	Pie, cherry, one crust*
53305070	Pie, cherry, individual size or tart*
53305700	Pie, lemon, not cream or meringue*
53305720	Pie, lemon, not cream or meringue, individual size or tart*
53307000	Pie, peach, two crust*
53307050	Pie, peach, one crust*
53307070	Pie, peach, individual size or tart*
53308000	Pie, pineapple, two crust*
53310000	Pie, raspberry, one crust*
53310050	Pie, raspberry, two crust*
53311000	Pie, rhubarb, two crust*
53312000	Pie, strawberry, one crust*
53313000	Pie, strawberry-rhubarb, two crust*
53314000	Pie, strawberry, individual size or tart*
53341000	Pie, banana cream*

Food	Food description
code	
53341500	Pie, buttermilk*
53341750	Pie, chess*
53342000	Pie, chocolate cream*
53343000	Pie, coconut cream*
53344000	Pie, custard*
53344070	Pie, custard, individual size or tart*
53344200	Mixed fruit tart filled with custard or cream cheese*
53344300	Dessert pizza*
53346000	Pie, peanut butter cream*
53346500	Pie, pineapple cream*
53347000	Pie, pumpkin*
53347070	Pie, pumpkin, individual size or tart*
53347600	Pie, squash*
53348000	Pie, strawberry cream*
53348070	Pie, strawberry cream, individual size or tart*
53360000	Pie, sweet potato*
53365000	Pie, vanilla cream*
53381000	Pie, lemon meringue*
53381070	Pie, lemon meringue, individual size or tart*
53385000	Pie, pecan*
53385500	Pie, oatmeal*
53386000	Pie, pudding, flavors other than chocolate*
53387000	Pie, Toll house chocolate chip*
53390000	Pie, shoo-fly*
53410100	Cobbler, apple*
53410300	Cobbler, berry*
53410500	Cobbler, cherry*
53410800	Cobbler, peach*
53410900	Cobbler, rhubarb*
53415100	Crisp, apple, apple dessert*
53430000	Crepe, NS as to filling*
53430100	Crepe, chocolate filled*
53430200	Crepe, fruit filled*
53440000	Strudel, apple*
53440300	Strudel, berry*
53440500	Strudel, cherry*
53440800	Strudel, cheese and fruit*
53450000	Turnover or dumpling, apple*
53450300	Turnover or dumpling, berry*
53450500	Turnover or dumpling, cherry*
53451000	Turnover or dumpling, peach*
53451500	Turnover, guava*
53452100	Pastry, fruit-filled*
53452120	Pastry, made with bean or lotus seed paste filling, baked*
53452130	Pastry, made with bean paste and salted egg yolk filling, baked*
53453150	Empanada, Mexican turnover, fruit-filled*

Food code	Food description
53453170	Empanada, Mexican turnover, pumpkin*
53510000	Danish pastry, plain or spice*
53510000	Danish pastry, with fruit*
53521140	Doughnut, jelly*
53530000	Breakfast tart*
53530010	Breakfast tart, lowfat*
53710500	Cereal or granola bar (Kellogg's Nutri-Grain Cereal Bar)*
53714520	Breakfast bar, cereal crust with fruit filling, lowfat*
54102200	Graham crackers, sandwich, with filling*
58174100	Dosa (Indian), with filling*
63101210	Apple pie filling
91305010	lcing, chocolate
91305020	lcing, white
	nd non-flavored soy milk
11320000	Soy milk
11320100	Soy milk, light
11320200	Soy milk, nonfat
11321000	Soy milk, chocolate
11321100	Soy milk, light, chocolate
11321200	Soy milk, nonfat, chocolate
11512030	Hot chocolate / Cocoa, ready to drink, made with non-dairy milk*
11513750	Chocolate milk, made from syrup with non-dairy milk*
56201360	Grits, instant, made with non-dairy milk, fat added*
56203075	Oatmeal, regular or quick, made with non-dairy milk, NS as to fat*
56203076	Oatmeal, regular or quick, made with non-dairy milk, no added fat*
56203077	Oatmeal, regular or quick, made with non-dairy milk, fat added*
56203106	Oatmeal, instant, plain, made with non-dairy milk, no added fat*
56207027	Cream of wheat, regular or quick, made with non-dairy milk, fat added*
56207102	Cream of wheat, instant, made with non-dairy milk, no added fat*
92101903	Coffee, Latte, with non-dairy milk*
92101906	Coffee, Latte, with non-dairy milk, flavored*
92101923	Frozen coffee drink, with non-dairy milk*
92101960	Coffee, Cafe Mocha, with non-dairy milk*
92101975	Coffee, Cafe Mocha, decaffeinated, with non-dairy milk*
92102020	Frozen mocha coffee drink, with non-dairy milk*
92102050	Frozen mocha coffee drink, with non-dairy milk and whipped cream*
92102502	Coffee, Iced Latte, with non-dairy milk*
92102505	Coffee, Iced Latte, with non-dairy milk, flavored*
92102602	Coffee, Iced Cafe Mocha, with non-dairy milk*
92161002	Coffee, Cappuccino, with non-dairy milk*
	ilk and milk drinks
11115400	Kefir, NS as to fat content
11511000	Chocolate milk, NFS
11511100	Chocolate milk, ready to drink, whole
11511200	Chocolate milk, ready to drink, reduced fat
11511300	Chocolate milk, ready to drink, fat free

Food code	Food description
11511400	Chocolate milk, ready to drink, low fat
11511550	Chocolate milk, ready to drink, reduced sugar, NS as to milk
11511600	Chocolate milk, ready to drink, low fat (Nesquik)
11511610	Chocolate milk, ready to drink, fat free (Nesquik)
11511700	Chocolate milk, ready to drink, low fat, no sugar added (Nesquik)
11512010	Hot chocolate / Cocoa, ready to drink
11512020	Hot chocolate / Cocoa, ready to drink, made with nonfat milk
11512100	Hot chocolate / Cocoa, ready to drink, with whipped cream*
11512110	Hot chocolate / Cocoa, ready to drink, made with nonfat milk and whipped cream*
11513400	Chocolate milk, made from syrup, NS as to type of milk
11513500	Chocolate milk, made from syrup with whole milk
11513550	Chocolate milk, made from syrup with reduced fat milk
11513600	Chocolate milk, made from syrup with low fat milk
11513700	Chocolate milk, made from syrup with fat free milk
11513801	Chocolate milk, made from light syrup with whole milk
11513802	Chocolate milk, made from light syrup with reduced fat milk
11513803	Chocolate milk, made from light syrup with low fat milk
11513804	Chocolate milk, made from light syrup with fat free milk
11519040	Strawberry milk, NFS
11519050	Strawberry milk, whole
11519105	Strawberry milk, reduced fat
11519200	Strawberry milk, low fat
11519205	Strawberry milk, fat free
11519210	Strawberry milk, reduced sugar
11526000	Milk, malted
11531000	Eggnog
11542100	Milk shake, fast food, chocolate
11542200	Milk shake, fast food, flavors other than chocolate
11543000	Milk shake, bottled, chocolate
11543010	Milk shake, bottled, flavors other than chocolate
11560000	Chocolate milk drink
11830400	Strawberry beverage powder, dry mix, not reconstituted**
Frozen dair	
11459990	Frozen yogurt, NFS
11460000 11460100	Frozen yogurt, vanilla
11460100	Frozen yogurt, chocolate
11460160	Yogurt, frozen, chocolate, lowfat milk Yogurt, frozen, flavors other than chocolate, lowfat milk
11460170	Yogurt, frozen, chocolate, nonfat milk
11460250	Yogurt, frozen, flavors other than chocolate, with sorbet or sorbet-coated
11460250	Yogurt, frozen, flavors other than chocolate, with solder of solder-coated
11460300	Yogurt, frozen, chocolate, nonfat milk, with low-calorie sweetener
11460400	Yogurt, frozen, flavors other than chocolate, nonfat milk, with low-calorie sweetener
11460500	Frozen yogurt, soft serve, vanilla
11460510	Frozen yogurt, soft serve, vanna Frozen yogurt, soft serve, chocolate
11461000	Yogurt, frozen, chocolate-coated
1101000	regard nozeri onocolato ocatoa

Food	Food description
code	
11461200	Frozen yogurt sandwich
11461210	Frozen yogurt bar, vanilla
11461250	Frozen yogurt cone, chocolate
11461260	Frozen yogurt cone, vanilla
11461270	Yogurt, frozen, cone, flavors other than chocolate, lowfat milk
11461300	Frozen yogurt cone, vanilla, waffle cone
11541110	Milk shake, home recipe, chocolate*
11541120	Milk shake, home recipe, flavors other than chocolate*
11541130	Milk shake, home recipe, chocolate, light*
11541135	Milk shake, home recipe, flavors other than chocolate, light*
13110000	Ice cream, NFS
13110100	Ice cream, vanilla
13110102	Ice cream, vanilla, with additional ingredients
13110110	Ice cream, chocolate
13110112	Ice cream, chocolate, with additional ingredients
13110120	Ice cream, rich, flavors other than chocolate
13110130	Ice cream, rich, chocolate
13110200	Ice cream, soft serve, vanilla
13110210	Ice cream, soft serve, chocolate
13110220	Ice cream, soft serve, NS as to flavor
13110320	Ice cream, no sugar added, flavors other than chocolate
13110330	Ice cream, no sugar added, chocolate
13110460	Gelato, vanilla
13110470	Gelato, chocolate
13120050	Ice cream bar, vanilla
13120100	Ice cream bar, vanilla, chocolate coated
13120110	Ice cream candy bar
13120120	Ice cream bar or stick, rich chocolate ice cream, thick chocolate covering
13120121	Ice cream bar or stick, rich ice cream, thick chocolate covering
13120130	Ice cream bar or stick, rich ice cream, chocolate covered, with nuts
13120140	Ice cream bar, chocolate
13120300	Ice cream bar, cake covered
13120310	Ice cream bar, stick or nugget, with crunch coating
13120400	Ice cream bar or stick with fruit
13120500	Ice cream sandwich, vanilla
13120510	Ice cream sandwich, chocolate
13120550	Ice cream cookie sandwich*
13120700	Ice cream cone with nuts, flavors other than chocolate
13120710	Ice cream cone, chocolate covered, with nuts, flavors other than chocolate
13120720	Ice cream cone, chocolate covered or dipped, flavors other than chocolate
13120730	Ice cream cone, scooped, vanilla
13120735	Ice cream cone, scooped, vanilla, waffle cone
13120740	Ice cream cone, NFS
13120760	Ice cream cone, chocolate covered or dipped, chocolate ice cream
13120770 13120775	Ice cream cone, scooped, chocolate
13120773	Ice cream cone, scooped, chocolate, waffle cone

Food code	Food description
13120782	Ice cream cone, soft serve, vanilla
13120784	Ice cream cone, soft serve, chocolate
13120786	Ice cream cone, soft serve, vanilla, waffle cone
13120788	Ice cream cone, soft serve, chocolate, waffle cone
13120790	Ice cream cone, vanilla, prepackaged
13120792	Ice cream cone, chocolate, prepackaged
13120800	Ice cream soda, flavors other than chocolate*
13120810	Ice cream soda, chocolate*
13121000	Ice cream sundae, NFS
13121100	Ice cream sundae, fruit topping
13121120	Banana split
13121300	Ice cream sundae, hot fudge topping
13121400	Ice cream sundae, caramel topping
13122100	Ice cream pie, no crust
13127000	Dippin' Dots, flash frozen ice cream snacks, flavors other than chocolate
13127010	Dippin' Dots, flash frozen ice cream snacks, chocolate
13130300	Light ice cream, vanilla
13130310	Light ice cream, chocolate
13130320	Light ice cream, no sugar added, NS as to flavor
13130330	Light ice cream, no sugar added, flavors other than chocolate
13130340	Light ice cream, no sugar added, chocolate
13130600	Light ice cream, soft serve, flavors other than chocolate
13130620	Light ice cream, soft serve cone, flavors other than chocolate
13130630	Light ice cream, soft serve cone, chocolate
13130700	Soft serve, blended with candy or cookies, from fast food
13135000	Light ice cream sandwich, vanilla
13135010	Light ice cream sandwich, chocolate
13136000	Ice cream sandwich, made with light, no sugar added ice cream
13140000	Light ice cream bar, vanilla
13140100	Light ice cream bar, vanilla, chocolate coated
13140115	Light ice cream bar, chocolate
13140500	Light ice cream, cone, flavors other than chocolate
13140575	Light ice cream, no sugar added, cone, flavors other than chocolate
13140580	Light ice cream, no sugar added, cone, chocolate
13140660	Light ice cream, sundae, soft serve, chocolate or fudge topping, without whipped cream
13140700	Creamsicle
13140900	Fudgesicle
13142100	Light ice cream cone, vanilla, prepackaged
13142110	Light ice cream cone, chocolate, prepackaged
13150000	Sherbet, all flavors
13160160	Fat free ice cream, no sugar added, flavors other than chocolate
13160400	Fat free ice cream, flavors other than chocolate
13160410	Fat free ice cream, chocolate
13161500	Milk dessert sandwich bar, frozen, made from lowfat milk
13161600	Fudgesicle, light
13161630	Light ice cream, bar or stick, with low-calorie sweetener, chocolate coated

Food code	Food description
53112000	Cake, ice cream and cake roll, chocolate*
53112100	Ice cream cake*
92510730	Fruit punch, made with soda, fruit juice, and sherbet or ice cream*
Grain produ	icts and pastas
27212000	Beef and noodles, no sauce*
27212050	Beef and macaroni with cheese sauce*
27212100	Beef and noodles with tomato-based sauce*
27212120	Chili con carne with beans and macaroni*
27212150	Beef goulash with noodles*
27212200	Beef and noodles with gravy*
27212300	Beef and noodles with cream or white sauce*
27212350	Beef stroganoff with noodles*
27212400 27220210	Beef and noodles with mushroom sauce* Ham and noodles, no sauce*
27242000	Chicken or turkey and noodles, no sauce*
27242000	Chicken or turkey and noodles with gravy*
27242300	Chicken or turkey and noodles with gravy
27242310	Chicken or turkey and noodles with cheese sauce*
27242400	Chicken or turkey and noodles with tomato-based sauce*
27242500	Chicken or turkey and noodles with soy-based sauce*
27250120	Shrimp and noodles, no sauce*
27250126	Shrimp and noodles with cream or white sauce*
27250128	Shrimp and noodles with soy-based sauce*
27250130	Shrimp and noodles with cheese sauce*
27250132	Shrimp and noodles with tomato sauce*
27250610	Tuna noodle casserole with cream or white sauce*
27250630	Tuna noodle casserole with mushroom sauce*
27313010	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27313020	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27313110	Beef chow mein or chop suey with noodles*
27313150	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; soy-based sauce*
27313160	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; soy-based sauce* Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based
27313210	sauce*
27313220	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based
27313220	Sauce*
27313410	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27313420	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27320025	Ham or pork, noodles and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27320027	Ham or pork, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27320080	Sausage, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based
	sauce*
27320310	Pork chow mein or chop suey with noodles*
27343010	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no
	sauce*

Food	Food description
code	
27343020	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; no
27343410	sauce* Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy;
	gravy*
27343420	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27343470	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy;
07040400	cream sauce, white sauce, or mushroom sauce*
27343480	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27343520	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy;
27343320	tomato-based sauce*
27343910	Chicken or turkey chow mein or chop suey with noodles*
27343950	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy;
	cheese sauce*
27350050	Shrimp chow mein or chop suey with noodles*
27350080	Tuna noodle casserole with vegetables, cream or white sauce*
27360010	Goulash, NFS*
27446350 27446355	Asian chicken or turkey garden salad, chicken and/or turkey, lettuce, fruit, nuts, no dressing*
27440500	Asian chicken or turkey garden salad with crispy noodles, chicken and/or turkey, lettuce, fruit, nuts, crispy noodles, no dressing*
28110380	Salisbury steak with gravy, macaroni and cheese, frozen meal*
28110660	Meatballs, Swedish, in gravy, with noodles, diet frozen meal*
28140100	Chicken dinner, NFS, frozen meal*
28140320	Chicken and noodles with vegetable, dessert, frozen meal*
28140740	Chicken patty or nuggets, boneless, breaded, with pasta and tomato sauce, fruit, dessert, frozen meal*
28143080	Chicken with noodles and cheese sauce, diet frozen meal*
28143130	Chicken and vegetable entree with noodles, frozen meal*
28143150	Chicken and vegetable entree with noodles, diet frozen meal*
28143170	Chicken in cream sauce with noodles and vegetable, frozen meal*
28144100	Chicken and vegetable entree with noodles and cream sauce, frozen meal*
28154010	Shrimp and vegetables in sauce with noodles, diet frozen meal*
53710400	Cereal or granola bar (General Mills Fiber One Chewy Bar)
53710500	Cereal or granola bar (Kellogg's Nutri-Grain Cereal Bar)*
53710502	Cereal or granola bar (Kellogg's Nutri-Grain Yogurt Bar)
53710504	Cereal or granola bar (Kellogg's Nutri-Grain Fruit and Nut Bar)
53710600	Milk 'n Cereal bar
53710700	Cereal or granola bar (Kellogy's Special K bar)
53710800 53710802	Cereal or granola bar (Kashi Chewy)
53710802	Cereal or granola bar (Kashi Crunchy) Cereal or granola bar (KIND Fruit and Nut Bar)
53710810	Cereal or granola bar (General Mills Nature Valley Chewy Trail Mix)
53710700	Cereal or granola bar, with yogurt coating (General Mills Nature Valley Chewy Granola Bar)
53710904	Cereal or granola bar (General Mills Nature Valley Sweet and Salty Granola Bar)
53710906	Cereal or granola bar (General Mills Nature Valley Crunchy Granola Bar)
53711000	Cereal or granola bar (Quaker Chewy Granola Bar)

Food	Food description
cod e 53711002	Caraal or granale har (Qualtor Chaun 00 Calaria Cranale Dar)
53711002	Cereal or granola bar (Quaker Chewy 90 Calorie Granola Bar) Cereal or granola bar (Quaker Chewy 25% Less Sugar Granola Bar)
53711004	Cereal or granola bar (Quaker Chewy Dipps Granola Bar)
53711000	Cereal or granola bar (Quaker Granola Bites)
53712000	Snack bar, oatmeal
53712000	Cereal or Granola bar, NFS
53712100	Cereal or granola bar, lowfat, NFS
53712210	Cereal or granola bar, nonfat
53713010	Cereal or granola bar, fruit and nut
53713100	Cereal or granola bar, peanuts, oats, sugar, wheat germ
53714200	Cereal or granola bar, chocolate coated, NFS
53714210	Cereal or granola bar, with coconut, chocolate coated
53714220	Cereal or granola bar with nuts, chocolate coated
53714230	Cereal or granola bar, oats, nuts, coated with non-chocolate coating
53714250	Cereal or granola bar, coated with non-chocolate coating
53714300	Cereal or granola bar, high fiber, coated with non-chocolate yogurt coating
53714400	Cereal or granola bar, with rice cereal
53714500	Breakfast bar, NFS
53714520	Breakfast bar, cereal crust with fruit filling, lowfat*
53720100	Nutrition bar (Balance Original Bar)
53720200	Nutrition bar (Clif Bar)
53720210	Nutrition bar (Clif Kids Organic Zbar)
53720300	Nutrition bar (PowerBar)
53720400	Nutrition bar (Slim Fast Original Meal Bar)
53720500	Nutrition bar (Snickers Marathon Protein Bar)
53720600	Nutrition bar (South Beach Living Meal Bar)
53720610	Nutrition bar (South Beach Living High Protein Bar)
53720700	Nutrition bar (Tiger's Milk)
53720800	Nutrition bar (Zone Perfect Classic Crunch)
53729000 56104000	Nutrition bar or meal replacement bar, NFS Pasta, vegetable, cooked
56104000	Noodles, cooked
56112000	Noodles, whole grain, cooked
56113990	Noodles, vegetable, cooked
56116990	Long rice noodles, made from mung beans, cooked
56117090	Rice noodles, cooked
56130000	Pasta, cooked
56132990	Pasta, whole grain, cooked
56140100	Pasta, gluten free
56200390	Barley, NS as to fat
56200400	Barley, no added fat
56200490	Buckwheat groats, NS as to fat
56200500	Buckwheat groats, no added fat
56200510	Buckwheat groats, fat added
56202000	Millet, no added fat
56202100	Millet, fat added

Food	Food description
code	
56204000	Quinoa, NS as to fat
56204005	Quinoa, no added fat
56204010	Quinoa, fat added
56207110	Bulgur, no added fat
56207120	Bulgur, fat added
56207130	Bulgur, NS as to fat
56207160	Couscous, plain, cooked
58130011	Lasagna with meat*
58130013	Lasagna with meat, canned*
58130014	Lasagna with meat, from restaurant*
58130015	Lasagna with meat, home recipe*
58130016	Lasagna with meat, frozen*
58130020	Lasagna with meat and spinach*
58130140	Lasagna with chicken or turkey*
58130150	Lasagna, with chicken or turkey, and spinach*
58130310	Lasagna, meatless*
58130320	Lasagna, meatless, with vegetables*
58131110	Ravioli, NS as to filling, with tomato sauce*
58131120	Ravioli, NS as to filling, with cream sauce*
58131310	Ravioli, meat-filled, no sauce*
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce*
58131323	Ravioli, meat-filled, with tomato sauce or meat sauce, canned*
58131330	Ravioli, meat-filled, with cream sauce*
58131510	Ravioli, cheese-filled, no sauce*
58131520	Ravioli, cheese-filled, with tomato sauce*
58131523	Ravioli, cheese-filled, with tomato sauce, canned*
58131535	Ravioli, cheese-filled, with cream sauce*
58131590	Ravioli, cheese and spinach-filled, no sauce*
58131600	Ravioli, cheese and spinach-filled, with cream sauce*
58131610	Ravioli, cheese and spinach filled, with tomato sauce*
58133120	Manicotti, cheese-filled, with tomato sauce, meatless*
58134120	Stuffed shells, cheese-filled, with tomato sauce, meatless*
58134130	Stuffed shells, cheese-filled, with meat sauce*
58134160	Stuffed shells, cheese- and spinach- filled, no sauce*
58134310	Stuffed shells, with fish and/or shellfish, with tomato sauce*
58134610	Tortellini, meat-filled, with tomato sauce*
58134613	Tortellini, meat-filled, with tomato sauce, canned*
58134620	Tortellini, cheese-filled, meatless, with tomato sauce*
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing*
58134650	Tortellini, meat-filled, no sauce*
58134660	Tortellini, cheese-filled, with cream sauce*
58134680	Tortellini, cheese-filled, no sauce*
58134710	Tortellini, spinach-filled, with tomato sauce*
58134720	Tortellini, spinach-filled, no sauce*
58135110	Chow fun noodles with meat and vegetables*
58135120	Chow fun noodles with vegetables, meatless*

Food	Food description
code	Dad Thai maatlaaa*
58137220	Pad Thai, meatless*
58137230	Pad Thai with chicken*
58137240	Pad Thai with seafood*
58137250	Pad Thai with meat*
58137300	Adobo, with noodles*
58145110	Macaroni or noodles with cheese*
58145111	Macaroni or noodles with cheese, from restaurant*
58145112	Macaroni or noodles with cheese, made from packaged mix*
58145113	Macaroni or noodles with cheese, canned*
58145117	Macaroni or noodles with cheese, Easy Mac type*
58145119	Macaroni or noodles with cheese, made from reduced fat packaged mix*
58145120	Macaroni or noodles with cheese and tuna*
58145135	Macaroni or noodles with cheese and meat*
58145136	Macaroni or noodles with cheese and meat, prepared from Hamburger Helper mix*
58145140	Macaroni or noodles with cheese and tomato*
58145160	Macaroni or noodles with cheese and frankfurters or hot dogs*
58145170	Macaroni or noodles with cheese and egg*
58145190	Macaroni or noodles with cheese and chicken or turkey*
58145300	Macaroni or noodles with cheese, whole grain*
58146120	Pasta with tomato-based sauce, cheese and meat*
58146150	Pasta with tomato-based sauce and cheese*
58146160	Pasta with vegetables, no sauce or dressing*
58146210	Pasta with sauce, NFS*
58146215	Pasta with sauce, meatless, school lunch*
58146221	Pasta with tomato-based sauce, restaurant*
58146222	Pasta with tomato-based sauce, home recipe*
58146223	Pasta with tomato-based sauce, ready-to-heat*
58146301	Pasta with tomato-based sauce, and added vegetables, restaurant*
58146302	Pasta with tomato-based sauce, and added vegetables, home recipe*
58146303	Pasta with tomato-based sauce, and added vegetables, ready-to-heat*
58146315	Pasta with sauce and meat, from school lunch*
58146321	Pasta with tomato-based sauce and meat, restaurant*
58146322	Pasta with tomato-based sauce and meat, home recipe*
58146323	Pasta with tomato-based sauce and meat, ready-to-heat*
58146331	Pasta with tomato-based sauce, meat, and added vegetables, restaurant*
58146332	Pasta with tomato-based sauce, meat, and added vegetables, home recipe*
58146333	Pasta with tomato-based sauce, meat, and added vegetables, ready-to-heat*
58146341	Pasta with tomato-based sauce and poultry, restaurant*
58146342	Pasta with tomato-based sauce and poultry, home recipe*
58146343	Pasta with tomato-based sauce and poultry, ready-to-heat*
58146351	Pasta with tomato-based sauce, poultry, and added vegetables, restaurant*
58146352	Pasta with tomato-based sauce, poultry, and added vegetables, home recipe*
58146353	Pasta with tomato-based sauce, poultry, and added vegetables, ready-to-heat*
58146361	Pasta with tomato-based sauce and seafood, restaurant*
58146362	Pasta with tomato-based sauce and seafood, home recipe*
58146363	Pasta with tomato-based sauce and seafood, ready-to-heat*

Food	Food description
code	·
58146371	Pasta with tomato-based sauce, seafood, and added vegetables, restaurant*
58146372	Pasta with tomato-based sauce, seafood, and added vegetables, home recipe*
58146373	Pasta with tomato-based sauce, seafood, and added vegetables, ready-to-heat*
58146381	Pasta with cream sauce, restaurant*
58146382	Pasta with cream sauce, home recipe*
58146383	Pasta with cream sauce, ready-to-heat*
58146391	Pasta with cream sauce and added vegetables, restaurant*
58146392	Pasta with cream sauce and added vegetables, from home recipe*
58146393	Pasta with cream sauce and added vegetables, ready-to-heat*
58146401	Pasta with cream sauce and meat, restaurant*
58146402	Pasta with cream sauce and meat, home recipe*
58146403	Pasta with cream sauce and meat, ready-to-heat*
58146411	Pasta with cream sauce, meat, and added vegetables, restaurant*
58146412	Pasta with cream sauce, meat, and added vegetables, home recipe*
58146413	Pasta with cream sauce, meat, and added vegetables, ready-to-heat*
58146421	Pasta with cream sauce and poultry, restaurant*
58146422	Pasta with cream sauce and poultry, home recipe*
58146423	Pasta with cream sauce and poultry, ready-to-heat*
58146431	Pasta with cream sauce, poultry, and added vegetables, restaurant*
58146432	Pasta with cream sauce, poultry, and added vegetables, home recipe*
58146433	Pasta with cream sauce, poultry, and added vegetables, ready-to-heat*
58146441	Pasta with cream sauce and seafood, restaurant*
58146442	Pasta with cream sauce and seafood, home recipe*
58146443	Pasta with cream sauce and seafood, ready-to-heat*
58146451	Pasta with cream sauce, seafood, and added vegetables, restaurant*
58146452	Pasta with cream sauce, seafood, and added vegetables, home recipe*
58146601	Pasta, whole grain, with tomato-based sauce, restaurant*
58146602	Pasta, whole grain, with tomato-based sauce, home recipe*
58146603	Pasta, whole grain, with tomato-based sauce, ready-to-heat*
58146612	Pasta, whole grain, with tomato-based sauce and added vegetables, home recipe*
58146613	Pasta, whole grain, with tomato-based sauce and added vegetables, ready-to-heat*
58146622	Pasta, whole grain, with tomato-based sauce and meat, home recipe*
58146623	Pasta, whole grain, with tomato-based sauce and meat, ready-to-heat*
58146632	Pasta, whole grain, with tomato-based sauce, meat, and added vegetables, home recipe*
58146641	Pasta, whole grain, with tomato-based sauce and poultry, restaurant*
58146642	Pasta, whole grain, with tomato-based sauce and poultry, home recipe*
58146652	Pasta, whole grain, with tomato-based sauce, poultry, and added vegetables, home recipe*
58146653	Pasta, whole grain, with tomato-based sauce, poultry, and added vegetables, ready-to-heat*
58146662	Pasta, whole grain, with tomato-based sauce and seafood, home recipe*
58146672	Pasta, whole grain, with tomato-based sauce, seafood, and added vegetables, home recipe*
58146682	Pasta, whole grain, with cream sauce, home recipe*
58146683	Pasta, whole grain, with cream sauce, ready-to-heat*
58146692	Pasta, whole grain, with cream sauce, and added vegetables, home recipe*
58146693	Pasta, whole grain, with cream sauce, and added vegetables, ready-to-heat*
58146702	Pasta, whole grain, with cream sauce and meat, home recipe*
58146713	Pasta, whole grain, with cream sauce, meat, and added vegetables, ready-to-heat*

Food	Food description
cod e 58146722	Pasta, whole grain, with cream sauce and poultry, home recipe*
58146723	Pasta, whole grain, with cream sauce and poulity, nome recipe
58146732	Pasta, whole grain, with cream sauce, poultry, and added vegetables, home recipe*
58146733	Pasta, whole grain, with cream sauce, poultry, and added vegetables, ready-to-heat*
58146741	Pasta, whole grain, with cream sauce and seafood, restaurant*
58147330	Macaroni or noodles, creamed, with cheese*
58147340	Macaroni or noodles, creamed, with cheese and tuna*
58147510	Flavored pasta*
58148110	Macaroni or pasta salad, made with mayonnaise*
58148111	Macaroni or pasta salad, made with light mayonnaise*
58148112	Macaroni or pasta salad, made with mayonnaise-type salad dressing*
58148114	Macaroni or pasta salad, made with Italian dressing*
58148117	Macaroni or pasta salad, made with light creamy dressing*
58148118	Macaroni or pasta salad, made with any type of fat free dressing*
58148120	Macaroni or pasta salad with egg*
58148130	Macaroni or pasta salad with tuna*
58148150	Macaroni or pasta salad with shrimp*
58148160	Macaroni or pasta salad with tuna and egg*
58148170	Macaroni or pasta salad with chicken*
58148180	Macaroni or pasta salad with cheese*
58148550	Macaroni or pasta salad with meat*
58301050	Lasagna with cheese and meat sauce, diet frozen meal*
58301110 58302000	Vegetable lasagna, frozen meal* Macaroni and cheese, diet frozen meal*
58302000	Beef and noodles with meat sauce and cheese, diet frozen meal*
58302050	Noodles with vegetables in tomato-based sauce, diet frozen meal*
58304010	Spaghetti and meatballs dinner, NFS, frozen meal*
58304060	Spaghetti with meat sauce, diet frozen meal*
58304200	Ravioli, cheese-filled, with tomato sauce, diet frozen meal*
58305250	Pasta with vegetable and cheese sauce, diet frozen meal*
72202010	Broccoli casserole with noodles*
75340160	Vegetable and pasta combinations with cream or cheese sauce, broccoli, pasta, carrots, corn,
	zucchini, peppers, cauliflower, peas, etc., cooked*
75460700	Vegetable combinations, including carrots, broccoli, and/or dark-green leafy; cooked, with pasta*
75460710	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with pasta*
75460800	Vegetable combinations, including carrots, broccoli, and/or dark-green leafy; cooked, with butter
	sauce and pasta*
75460900	Chow mein or chop suey, meatless, with noodles*
Gravies	
13411000	White sauce or gravy
13412000	Milk gravy, quick gravy
27112000	Beef with gravy*
27112010	Salisbury steak with gravy*
27118180	Beef stew, meat with gravy, no potatoes, Puerto Rican style*
27120020	Ham or pork with gravy*
27120120	Sausage gravy*

Food	Food description
code	
27130010	Lamb or mutton with gravy*
27136080	Venison or deer with gravy*
27142000	Chicken with gravy*
27142200	Turkey with gravy*
27211200	Beef stew with potatoes, gravy*
27211300	Beef, roast, hash*
27212200	Beef and noodles with gravy*
27213200	Beef and rice with gravy*
27220510	Ham or pork and potatoes with gravy*
27241010	Chicken or turkey and potatoes with gravy*
27242200	Chicken or turkey and noodles with gravy*
27260050	Meatballs, with breading, NS as to type of meat, with gravy*
27311410	Beef stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27311420	Beef stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27311510	Shepherd's pie with beef*
27311600	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27311605	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27313410	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27313420	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27315410	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320120	Sausage, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320140	Pork, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320150	Pork, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27330030	Lamb or mutton stew with potatoes and vegetables including carrots, broccoli, and/or dark-green
	leafy; gravy*
27336200	Venison or deer, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy;
	gravy*
27341000	Chicken or turkey, potatoes, corn, and cheese, with gravy*
27341025	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy;
	gravy*
27341030	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27341310	Chicken or turkey stew with potatoes and vegetables including carrots, broccoli, and/or dark-green
	leafy; gravy*
27341320	Chicken or turkey stew with potatoes and vegetables excluding carrots, broccoli, and dark-green
	leafy; gravy*
27343410	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy;
	gravy*
27343420	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27345220	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27347220	Chicken or turkey, stuffing, and vegetables including carrots, broccoli, and/or dark-green leafy;
	gravy*
27347230	Chicken or turkey, stuffing, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27347240	Chicken or turkey, dumplings, and vegetables including carrots, broccoli, and/or dark green leafy;
	gravy*
27347250	Chicken or turkey, dumplings, and vegetables excluding carrots, broccoli, and dark green leafy;
	gravy*

Food	Food description
code	
27416450	Beef and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, gravy*
27416500	Beef and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, gravy*
27430400	Lamb or mutton stew with vegetables including carrots, broccoli, and/or dark-green leafy; no
07400440	potatoes, gravy*
27430410	Lamb or mutton stew with vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes,
07440110	gravy* Chielen er turken and naratables including sorrets, breezeli, and/ar dark groen leafn, na natataos
27442110	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes,
27442120	gravy* Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes,
2/442120	gravy*
28110220	Sirloin, chopped, with gravy, mashed potatoes, vegetable, frozen meal*
28110220	Sirloin tips, with gravy, potatoes, vegetable, frozen meal*
28110230	Sirloin beef, with gravy, potatoes, vegetable, frozen meal*
28110310	Salisbury steak with gravy, potatoes, vegetable, frozen meal*
28110330	Salisbury steak with gravy, whipped potatoes, vegetable, dessert, frozen meal*
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert, frozen meal*
28110380	Salisbury steak with gravy, macaroni and cheese, frozen meal*
28110510	Beef, sliced, with gravy, potatoes, vegetable, frozen meal*
28110660	Meatballs, Swedish, in gravy, with noodles, diet frozen meal*
28145100	Turkey with gravy, dressing, vegetable and fruit, diet frozen meal*
28145210	Turkey with gravy, dressing, potatoes, vegetable, frozen meal*
28500000	Gravy, poultry
28500010	Gravy, meat or poultry, with wine
28500040	Gravy, beef
28500050	Gravy, giblet
28500070	Gravy, beef or meat, home recipe
28500080	Gravy, poultry, home recipe
28500100	Gravy, mushroom
28501010	Gravy, beef, fat free
28501110	Gravy, poultry, fat free
28510010	Gravy or sauce, poultry-based from Puerto Rican-style chicken fricasse
28520000	Gravy, made with soy sauce
28520010	Gravy, NFS
41811950	Swiss steak, with gravy, meatless*
42204100	Gravy, vegetarian
55502000	Flour and water gravy
58128000	Biscuit with gravy*
58164530	Rice, white, with gravy, NS as to fat*
58164540	Rice, white, with gravy, no added fat*
58164550	Rice, white, with gravy, fat added*
58164840	Rice, brown, with gravy, no added fat* Rice, white, with vegetables and gravy, NS as to fat*
58165030 58165040	Rice, white, with vegetables and gravy, no added fat*
58306020	Beef enchilada, chili gravy, rice, refried beans, frozen meal*
71501006	Potato, mashed, from fast food, with gravy*
71501000	Potato, mashed, from fresh, made with milk, with gravy*
11301012	r otato, mashou, nom nosh, mauc with milik, with gravy

Food	Food description
code	Detate mached from restaurant with groups
71501017	Potato, mashed, from restaurant, with gravy*
71501054	Potato, mashed, from dry mix, made with milk, with gravy*
71501075	Potato, mashed, ready-to-heat, with gravy*
75439010	Vegetable stew without meat*
89901030	Gravy, for use with vegetables*
Isotonic be	
92900300	Sports drink, dry concentrate, not reconstituted**
95320200	Sports drink (Gatorade G)
95320500	Sports drink (Powerade)
95321000	Sports drink, NFS
95322200	Sports drink, low calorie (Gatorade G2)
95322500	Sports drink, low calorie (Powerade Zero)
95323000	Sports drink, low calorie
95330100	Fluid replacement, electrolyte solution
	s and punch
64200100	
64201010	Apricot nectar
64201500	Banana nectar
64202010	Cantaloupe nectar
64203020	Guava nectar
64204010	Mango nectar
64205010	Peach nectar
64213010	Passion fruit nectar
64215010	Pear nectar
64221010	Soursop, nectar
75200700	Aloe vera juice drink
92432000	Fruit juice drink, citrus, carbonated
92433000	Fruit juice drink, noncitrus, carbonated
92510610	Fruit juice drink
92510650	Tamarind drink
92510720	Fruit punch, made with fruit juice and soda*
92510730	Fruit punch, made with soda, fruit juice, and sherbet or ice cream*
92510955	Lemonade, fruit juice drink
92511250	Fruit juice beverage, 40-50% juice, citrus
92530510	Cranberry juice drink, with high vitamin C
92530610	Fruit juice drink, with high vitamin C
92530950	Vegetable and fruit juice drink, with high vitamin C
92531030	Fruit juice drink (Sunny D)
92550030	Fruit juice drink, with high vitamin C, light
92550035	Fruit juice drink, light
92550040	Fruit juice drink, diet
92550110	Cranberry juice drink, with high vitamin C, light
92550200	Grape juice drink, light
92550350	Orange juice beverage, 40-50% juice, light
92550360	Apple juice beverage, 40-50% juice, light
92550370	Lemonade, fruit juice drink, light

code 92550300 Pomegranate juice beverage, 40-50% juice, light 92550400 Vegetable and fruit juice drink, with high vitamin C, light 92550405 Vegetable and fruit juice drink, with high vitamin C, light 92550200 Fruit juice drink, (Capri Sun) 92552031 Fruit juice drink, (Capri Sun) 92552031 Fruit juice drink, with high vitamin C, plus added calcium 9301012 Cape Cod ⁺ 93301111 Martini, flavored ⁺ 93301210 Fruit juice drink, with dry milk, not reconstituted 11120000 Milk, dry, reconstituted, NS as to fat content 11121000 Milk, dry, reconstituted, Nole 11121300 Chocolate milk, made from dry mix, NS as to type of milk 11513100 Chocolate milk, made from dry mix with hole at milk 11513120 Chocolate milk, made from reduced sugar mix with whole milk 11513320 Chocolate milk, made from reduced sugar mix with whole milk 11513320 Chocolate milk, made from reduced sugar mix with hole at milk 11513330 Chocolate milk, made from reduced sugar mix with hole milk 11513332 Chocolate milk, made from reduced sugar mix with Neole milk 11513	Food	Food description
 92550400 Vegetable and fruit juice drink, with high vitamin C, light 9255203 Fruit juice drink, reduced sugar (Sunny D) 9255203 Fruit juice drink, reduced sugar (Sunny D) 9258210 Fruit juice drink, added calcium (Sunny D) 9258210 Fruit juice drink, added calcium (Sunny D) 9301032 Cape Cod" 9301111 Martini, flavored" 9301027 Fruit punch, alcoholic " <i>Milk, dry, and powdered mixtures with dry milk, not reconstituted</i> 11120000 Milk, dry, reconstituted, NS as to fat content 11121100 Milk, dry, reconstituted, fat free (skim) 1151300 Chocolate milk, made from dry mix, NS as to type of milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513200 Chocolate milk, made from dry mix with a fat free milk 11513300 Chocolate milk, made from dry mix with a fat free milk 11513300 Chocolate milk, made from reduced sugar mix with neduced fat milk 11513300 Chocolate milk, made from reduced sugar mix with reduced fat milk 11513305 Chocolate milk, made from reduced sugar mix with neduced fat milk 11513305 Chocolate milk, made from reduced sugar mix with neduced fat milk 11513305 Chocolate milk, made from dry mix with fat free milk 11513385 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513382 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513384 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513395 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513394 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513395 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513394 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513395 Chocolate milk,		
 92550405 Vegetable and fruit juice drink, with high vitamin C, light 9255203 Fruit juice drink, reduced sugar (Sunny D) 92582100 Fruit juice drink, with high vitamin C, plus added calcium 92882110 Fruit juice drink, added calcium (Sunny D) 9300102 Cape Cod* 93001121 Martini, flavored* 9301111 Martini, flavored* 9301111 Martini, flavored* 9301110 Milk, dry, reconstituted, NS as to fat content 11121000 Milk, dry, reconstituted, whole 11121100 Milk, dry, reconstituted, whole 11121300 Milk, dry, reconstituted, whole 11121300 Chocolate milk, made from dry mix, NS as to type of milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513300 Chocolate milk, made from dry mix with reduced fat milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513300 Chocolate milk, made from reduced sugar mix with hole milk 11513300 Chocolate milk, made from reduced sugar mix with hole milk 11513300 Chocolate milk, made from reduced sugar mix with hole milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513310 Chocolate milk, made from dry mix with whole milk 11513320 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513331 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513332 Chocolate milk, made from dry mix with hole fat milk (Nesquik) 11513332 Chocolate milk, made from dry mix with hole milk (Nesquik) 11513334 Chocolate milk, made from dry mix with hole milk (Nesquik) 11513342 Chocolate milk, made from dry mix with fat free milk (Nesquik) 11513343 Chocolate milk, made from no sugar added dry mix with hole milk (Nesquik) 11513344 Chocolate milk, made from no sugar added dry mix and thole milk (Nesquik) 115	92550380	Pomegranate juice beverage, 40-50% juice, light
 92552020 Fruit juice drink, reduced sugar (Sunny D) 92552030 Fruit juice drink (Capri Sun) 92582100 Fruit juice drink, added calcium (Sunny D) 93301032 Cape Cod* 93301111 Martini, flavored* 93301270 Fruit juice drink, added calcium (Sunny D) 93301270 Fruit juice drink, alcoholic* <i>Milk, dry, and powdered mixtures with dry milk, not reconstituted</i> 11120000 Milk, dry, reconstituted, NS as to fat content 11121100 Milk, dry, reconstituted, fat free (skim) 11513000 Chocolate milk, made from dry mix, NS as to type of milk 11513100 Chocolate milk, made from dry mix with whole milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513200 Chocolate milk, made from dry mix with reduced fat milk 11513300 Chocolate milk, made from dry mix with fat free milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513300 Chocolate milk, made from reduced sugar mix with how fat milk 11513360 Chocolate milk, made from reduced sugar mix with how fat milk 11513360 Chocolate milk, made from dry mix with ow fat milk 11513380 Chocolate milk, made from dry mix with reduced fat milk 11513381 Chocolate milk, made from dry mix with reduced fat milk 11513382 Chocolate milk, made from dry mix with low fat milk (Nesquik) 11513381 Chocolate milk, made from dry mix with fore milk (Nesquik) 11513381 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513393 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513394 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513395 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513394 Chocolate / Cocca, made with dry mix and re	92550400	
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 93301032 Cape Cod* 93301131 Martini, flavored* 93301270 Fruit punch, alcoholic* <i>Milk, dry, and powdered mixtures with dry milk, not reconstituted</i> 11120000 Milk, dry, reconstituted, NS as to fat content 11121100 Milk, dry, reconstituted, whole 11121300 Milk, dry, reconstituted, taf free (skim) 1151300 Chocolate milk, made from dry mix, NS as to type of milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513100 Chocolate milk, made from dry mix with reduced fat milk 11513200 Chocolate milk, made from dry mix with fat free milk 11513200 Chocolate milk, made from dry mix with fat free milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513360 Chocolate milk, made from reduced sugar mix with reduced fat milk 11513360 Chocolate milk, made from reduced sugar mix with reduced fat milk 11513360 Chocolate milk, made from dry mix, NS as to type of milk (Nesquik) 11513361 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513382 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513382 Chocolate milk, made from dry mix with fat free milk (Nesquik) 11513383 Chocolate milk, made from no sugar added dry mix with hole milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with hole milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with low fat milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with low fat milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with low fat milk (Nesquik) 11513393 Chocolate milk, made from no sugar added dry mix with low fat milk (Nesquik) 11513440 Hot chocolate / Cocca, made with dry mix and whole milk 11514100 Hot chocolate / Cocca, made with dry mix and whole milk 11514104 Hot chocolate / Coc	92582100	Fruit juice drink, with high vitamin C, plus added calcium
 93301111 Martini, flavored* 93301270 Fruit punch, alcoholic* <i>Milk, dry, and powdered mixtures with dry milk, not reconstituted</i> 1112000 Milk, dry, reconstituted, NS as to fat content 1112110 Milk, dry, reconstituted, NS as to fat content 11121300 Milk, dry, reconstituted, fat free (skim) 1151300 Chocolate milk, made from dry mix, NS as to type of milk 11513150 Chocolate milk, made from dry mix with value milk 11513150 Chocolate milk, made from dry mix with reduced fat milk 11513150 Chocolate milk, made from dry mix with low fat milk 11513300 Chocolate milk, made from dry mix with low fat milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513300 Chocolate milk, made from reduced sugar mix with neduced fat milk 11513360 Chocolate milk, made from reduced sugar mix with low fat milk 11513380 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513380 Chocolate milk, made from dry mix with whole milk (Nesquik) 11513381 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513382 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513381 Chocolate milk, made from no sugar added dry mix with whole milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with reduced fat milk (Nesquik) 11513393 Chocolate milk, made from no sugar added dry mix with hole milk (Nesquik) 11513393 Chocolate nilk, made from no sugar added dry mix with low fat milk (Nesquik) 11513394 Chocolate / Cocoa, made with dry mix and water 1151410 Hot chocolate / Cocoa, made with dry mix and water 1151410 Hot chocolate / Cocoa, made with dry mix and fat free milk 1151410 Hot chocolate / Cocoa, made with no sugar added dry mix and water 1151430 Hot chocolate / Cocoa, made with no sugar added dry mix and low fat milk 1151430 Ho	92582110	Fruit juice drink, added calcium (Sunny D)
 93301270 Fruit punch, alcoholic* <i>Milk, dry, and powdered mixtures with dry milk, not reconstituted</i> 1112000 Milk, dry, reconstituted, NS as to fat content 11121100 Milk, dry, reconstituted, whole 11121300 Chocolate milk, made from dry mix, NS as to type of milk 1151300 Chocolate milk, made from dry mix with whole milk 11513100 Chocolate milk, made from dry mix with whole milk 11513100 Chocolate milk, made from dry mix with hole tar milk 1151320 Chocolate milk, made from dry mix with hole milk 11513300 Chocolate milk, made from dry mix with fat free milk 11513300 Chocolate milk, made from reduced sugar mix with whole milk 11513350 Chocolate milk, made from reduced sugar mix with hole milk 11513360 Chocolate milk, made from reduced sugar mix with hole milk 11513360 Chocolate milk, made from reduced sugar mix with whole milk 11513360 Chocolate milk, made from reduced sugar mix with low fat milk 11513380 Chocolate milk, made from dry mix, NS as to type of milk (Nesquik) 11513381 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513382 Chocolate milk, made from dry mix with reduced fat milk (Nesquik) 11513383 Chocolate milk, made from no sugar added dry mix with reduced fat milk (Nesquik) 11513391 Chocolate milk, made from no sugar added dry mix with reduced fat milk (Nesquik) 11513392 Chocolate milk, made from no sugar added dry mix with hole milk (Nesquik) 11513393 Chocolate / Cocoa, made with dry mix and water 1151410 Hot chocolate / Cocoa, made with dry mix and water 11514110 Hot chocolate / Cocoa, made with dry mix and fat free milk 1151430 Hot chocolate / Cocoa, made with no sugar added dry mix and reduced fat milk 1151430 Hot chocolate / Cocoa, made with no sugar added dry mix and reduced fat milk 1151430 Hot chocolate / Cocoa, made with no sugar added	93301032	Cape Cod*
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 11830100 Hot chocolate / Cocoa, dry mix, not reconstituted** 11830115 Hot chocolate / Cocoa, dry mix, no sugar added, not reconstituted** 		
11830115 Hot chocolate / Cocoa, dry mix, no sugar added, not reconstituted**		
T1830160 Chocolate beverage powder, dry mix, not reconstituted**		, ,
	11830160	Chocolate beverage powder, dry mix, not reconstituted ^{^^}

Food	Food description
code	
11830165	Chocolate beverage powder, light, dry mix, not reconstituted**
11830260	Milk, malted, dry mix, not reconstituted**
24201360	Turkey, light or dark meat, fried, coated, skin not eaten**
24201370	Turkey, light or dark meat, fried, coated, skin eaten**
24301210	Duck, coated, fried**
27212050	Beef and macaroni with cheese sauce**
28160310	Meat loaf with potatoes, vegetable, frozen meal**
58127210	Croissant sandwich, filled with ham and cheese**
58310210	Sausage and french toast, frozen meal**
75412060	Eggplant parmesan casserole, regular**
91304070	Topping, peanut butter, thick, fudge type**
95201000	Nutritional powder mix (Carnation Instant Breakfast)**
95201010	Nutritional powder mix, sugar free (Carnation Instant Breakfast)**
95201200	Nutritional powder mix (EAS Whey Protein Powder)**
95201300	Nutritional powder mix (EAS Soy Protein Powder)**
95201500	Nutritional powder mix, high protein (Herbalife)**
95201600	Nutritional powder mix (Isopure)**
95201700	Nutritional powder mix (Kellogg's Special K20 Protein Water)**
95202000	Nutritional powder mix (Muscle Milk)**
95210000	Nutritional powder mix (Slim Fast)**
95210020	Nutritional powder mix, high protein (Slim Fast)**
95220000	Nutritional powder mix, NFS**
95220010	Nutritional powder mix, high protein, NFS**
95230000	Nutritional powder mix, whey based, NFS**
95230010	Nutritional powder mix, protein, soy based, NFS**
95230020	Nutritional powder mix, protein, light, NFS**
95230030	Nutritional powder mix, protein, NFS**
	d dairy alternatives
11350000	Almond milk, sweetened
11350010	Almond milk, sweetened, chocolate
11350020	Almond milk, unsweetened
11350030	Almond milk, unsweetened, chocolate
11360000	Rice milk
11370000	Coconut milk
11512030	Hot chocolate / Cocoa, ready to drink, made with non-dairy milk*
11513310	Chocolate milk, made from dry mix with non-dairy milk
11513395	Chocolate milk, made from no sugar added dry mix with non-dairy milk (Nesquik)
11513750	Chocolate milk, made from syrup with non-dairy milk*
11514150	Hot chocolate / Cocoa, made with dry mix and non-dairy milk
11514360	Hot chocolate / Cocoa, made with no sugar added dry mix and non-dairy milk
12210520	Coffee creamer, soy, liquid
41420380	Yogurt, soy
41480020	Frozen dessert, non-dairy
42401100	Yogurt, coconut milk
56201360	Grits, instant, made with non-dairy milk, fat added*
56203075	Oatmeal, regular or quick, made with non-dairy milk, NS as to fat*

Food	Food description
code	
56203076	Oatmeal, regular or quick, made with non-dairy milk, no added fat* Oatmeal, regular or quick, made with non-dairy milk, fat added*
56203077 56203106	Oatmeal, regular of quick, made with non-dairy milk, no added fat*
56205230	Rice dessert bar, frozen, flavors other than chocolate, nondairy, carob covered
56207027	Cream of wheat, regular or quick, made with non-dairy milk, fat added*
56207102	Cream of wheat, instant, made with non-dairy milk, no added fat*
63402970	Fruit salad, excluding citrus fruits, with nondairy whipped topping*
92101903	Coffee, Latte, with non-dairy milk*
92101906	Coffee, Latte, with non-dairy milk, flavored*
92101923	Frozen coffee drink, with non-dairy milk*
92101960	Coffee, Cafe Mocha, with non-dairy milk*
92101975	Coffee, Cafe Mocha, decaffeinated, with non-dairy milk*
92102020	Frozen mocha coffee drink, with non-dairy milk*
92102050	Frozen mocha coffee drink, with non-dairy milk and whipped cream*
92102502	Coffee, Iced Latte, with non-dairy milk*
92102505	Coffee, Iced Latte, with non-dairy milk, flavored*
92102602	Coffee, Iced Cafe Mocha, with non-dairy milk*
92161002	Coffee, Cappuccino, with non-dairy milk*
27564420	d meat substitutes Frankfurter or hot dog sandwich, meatless, plain, on bun*
27564420	Frankfurter or hot dog sandwich, meatless, plain, on bread*
41440000	Textured vegetable protein, dry
41810200	Bacon strip, meatless
41810400	Breakfast link, pattie, or slice, meatless
41810600	Chicken, meatless, NFS
41810610	Chicken, meatless, breaded, fried
41811400	Frankfurter or hot dog, meatless
41811600	Luncheon slice, meatless-beef, chicken, salami or turkey
41811800	Meatball, meatless
41811890	Vegetarian burger or patty, meatless, no bun
41811950	Swiss steak, with gravy, meatless*
41812000	Sandwich spread, meat substitute type
41812450	Vegetarian chili, made with meat substitute*
41812600	Vegetarian, fillet
41812900 59003000	Vegetarian meat loaf
	Meat substitute, cereal- and vegetable protein-based, fried fruits and fruit juices
27111100	Beef goulash*
27116300	Beef with sweet and sour sauce*
27120060	Sweet and sour pork*
27150170	Sweet and sour shrimp*
27211100	Beef stew with potatoes, tomato-based sauce*
27212150	Beef goulash with noodles*
27336100	Venison or deer stew with potatoes and vegetables including carrots, broccoli, and/or dark-green
	leafy: tomato-based sauce*

Food code	Food description
27336150	Venison or deer stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy;
004 4004 0	tomato-based sauce*
28143210	Chicken in orange sauce with almond rice, diet frozen meal*
42403010	Coconut water, unsweetened
42404010	Coconut water, sweetened
61101200	Grapefruit, canned
61101220	Grapefruit, canned or frozen, unsweetened, water pack
61119020	Orange, sections, canned, juice pack
61122300	Orange, canned, NFS
61122320	Orange, canned, juice pack
61122330	Orange, canned, in syrup
61122350	Orange, mandarin, canned or frozen, drained
61201020 61201220	Grapefruit juice, 100%, NS as to form Grapefruit juice, 100%, canned, bottled or in a carton
61201220	Grapefruit juice, 100%, with calcium added
61210000	Orange juice, 100%, NFS
61210000	Orange juice, 100%, canned, bottled or in a carton
61210220	Orange juice, 100%, with calcium added, canned, bottled or in a carton
61210230	Orange juice, 100%, frozen, reconstituted
61210020	Orange juice, 100%, frozen, not reconstituted**
61210820	Orange juice, 100%, with calcium added, frozen, reconstituted
61213220	Tangerine juice, 100%
61213800	Fruit juice blend, citrus, 100% juice
62101000	Fruit, dried, NFS, uncooked
62101050	Fruit mixture, dried
62101100	Apple, dried
62101230	Apple, dried, cooked, with sugar
62101300	Apple chips
62104100	Apricot, dried
62104220	Apricot, dried, cooked, unsweetened
62105000	Blueberries, dried
62106000	Cherries, dried
62107200	Banana chips
62108100	Currants, dried
62109100	Cranberries, dried
62110100	Date
62113100	Fig, dried
62114050	Mango, dried
62114110	Papaya, dried
62116100	Peach, dried
62119100	Pear, dried
62120000	Persimmon, dried
62120100	Pineapple, dried
62121100	Plum, rock salt, dried
62122100	Prune, dried
62122200	Prune, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener

Food	Food description
code	During defend an electric descent
62122220	Prune, dried, cooked, unsweetened
62125100	Raisins
62125110	Raisins, cooked
62126000	Tamarind, dried
63100110	Fruit, pickled
63101110	Applesauce, regular
63101120	Applesauce, unsweetened
63101130	Applesauce, stewed apples, with sugar
63101150	Applesauce, flavored
63103110	Apricot, canned
63103140	Apricot, cooked or canned, in light syrup
63103150	Apricot, cooked or canned, drained solids
63103170 63111010	Apricot, cooked or canned, juice pack Cherries, maraschino
63113110	
63115110	Cherries, sour, red, cooked, unsweetened Cherries, canned
63115110	Cherries, sweet, cooked or canned, in heavy syrup
63115130	Cherries, sweet, cooked or canned, in light syrup
63115140	Cherries, sweet, cooked or canned, drained solids
63115150	Cherries, frozen
63123110	Grapes, seedless, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to
03123110	type of sweetener
63129030	Mango, canned
63129050	Mango, frozen
63133100	Papaya, canned
63135110	Peach, canned, NFS
63135120	Peach, cooked or canned, unsweetened, water pack
63135130	Peach, cooked or canned, in heavy syrup
63135140	Peach, canned, in syrup
63135150	Peach, cooked or canned, drained solids
63135170	Peach, canned, juice pack
63135610	Peach, frozen, NS as to added sweetener
63135620	Peach, frozen
63135630	Peach, frozen, with sugar
63137110	Pear, canned, NFS
63137120	Pear, cooked or canned, unsweetened, water pack
63137130	Pear, cooked or canned, in heavy syrup
63137140	Pear, canned, in syrup
63137150	Pear, cooked or canned, drained solids
63137170	Pear, canned, juice pack
63141110	Pineapple, canned, NFS
63141120	Pineapple, cooked or canned, unsweetened, waterpack
63141130	Pineapple, cooked or canned, in heavy syrup
63141140	Pineapple, canned, in syrup
63141150	Pineapple, cooked or canned, drained solids
63141170	Pineapple, canned, juice pack

Food	Food description
code	
63141200	Pineapple, frozen
63143110	Plum, canned
63147130	Rhubarb, cooked or canned, in heavy syrup
63147620	Rhubarb, frozen, with sugar
63148750	Tamarind
63200200	Berries, frozen, NFS
63200200	Blackberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of
03201110	sweetener
63201600	Blackberries, frozen
63203110	Bluberries, canned
63203120	Blueberries, cooked or canned, unsweetened, water pack
63203570	Blueberries, frozen, NS as to sweetened or unsweetened
63203600	Blueberries, frozen
63207110	Cranberry sauce
63219110	Raspberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of
00217110	sweetener
63219610	Raspberries, frozen
63223110	Strawberries, canned
63223610	Strawberries, frozen
63301010	Ambrosia
63311080	Fruit cocktail or mix, frozen
63311110	Fruit cocktail, canned, NFS
63311120	Fruit cocktail, cooked or canned, unsweetened, water pack
63311130	Fruit cocktail, cooked or canned, in heavy syrup
63311140	Fruit cocktail, canned, in syrup
63311150	Fruit cocktail, cooked or canned, drained solids
63311170	Fruit cocktail, canned, juice pack
63311180	Fruit mixture, frozen
63401010	Apple salad with dressing*
63401060	Apple, candied
63401070	Fruit, chocolate covered
63401990	Banana, chocolate-covered with nuts
63402950	Fruit salad, excluding citrus fruits, with salad dressing or mayonnaise*
63402960	Fruit salad, excluding citrus fruits, with whipped cream*
63402980	Fruit salad, excluding citrus fruits, with marshmallows*
63403020	Fruit salad, including citrus fruit, with whipped cream*
63403040	Fruit salad, including citrus fruits, with marshmallows*
63403100	Fruit dessert with cream and/or pudding and nuts*
64100100	Fruit juice, NFS
64100110	Fruit juice blend, 100% juice
64100200	Cranberry juice blend, 100% juice
64100220	Cranberry juice blend, 100% juice, with calcium added
64101010	Apple cider
64104010	Apple juice, 100%
64104030	Apple juice, 100%, with calcium added
64104600	Blackberry juice, 100%

Food code	Food description
64104610	Blueberry juice
64105400	Cranberry juice, 100%, not a blend
64116020	Grape juice, 100%
64116060	Grape juice, 100%, with calcium added
64120010	Papaya juice, 100%
64121000	Passion fruit juice, 100%
64124020	Pineapple juice, 100%
64126000	Pomegranate juice, 100%
64132010	Prune juice, 100%
64132500	Strawberry juice, 100%
64133100	Watermelon juice, 100%
78101000	Vegetable and fruit juice, 100% juice, with high vitamin C
91361020	Fruit sauce*
93301075	Greyhound*
93301115	Mimosa*
93301132	Orange Blossom*
93301140	Screwdriver*
93301141	Seabreeze*
93301200	Pina Colada*
93301275	Champagne punch*
93301310	Mai Tai*
93301320	Tequila Sunrise*
	vegetables and vegetable juices
27111100	Beef goulash*
27113100	Beef stroganoff*
27116100	Beef curry*
27116110	Beef curry with rice*
27120080	Ham stroganoff*
27120160	Pork curry*
27130100	Lamb or mutton curry*
27141000	Chicken or turkey cacciatore*
27146150	Chicken curry*
27146155	Chicken curry with rice*
27150100	Shrimp curry*
27150320	Fish curry*
27150325	Fish curry with rice*
27212150	Beef goulash with noodles*
27212350	Beef stroganoff with noodles*
27243300	Chicken or turkey and rice with cream sauce*
27311110	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27311120	Beef, potatoes, and vegetables, excluding carrots, broccoli, and dark-green leafy; no sauce*
27311210	Corned beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27311310	Beef stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; ton

27311310 Beef stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; tomatobased sauce*

Food	Food description
code 27311320	Beef stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-
27311410	based sauce* Beef stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27311410 27311420	Beef stew with potatoes and vegetables including carrots, broccoli, and dark-green leafy; gravy*
27311420	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27311605	Beef, potatoes, and vegetables including carrots, broccoli, and dark-green leafy; gravy*
27311610	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce,
27511010	white sauce, or mushroom sauce*
27311620	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27311625	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27311630	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27311635	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27311640	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27313010	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27313020	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27313210	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27313220	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27313410	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27313420	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27315010	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27315020	Beef, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27315210	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27315220	Beef, rice, and vegetables excluding carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27315340	Beef, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27315410	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320025	Ham or pork, noodles and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27320027	Ham or pork, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27320040	Pork, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27320080	Sausage, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27320100	Pork, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27320110	Pork, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27320120	Sausage, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320140	Pork, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27320150	Pork, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27320210	Pork, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27320350	Pork, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27320410	Ham, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27320450	Ham, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*

Food code	Food description
27330030	Lamb or mutton stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27330210	Lamb or mutton stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27330220	Lamb or mutton stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27336100	Venison or deer stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27336150	Venison or deer stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27336200	Venison or deer, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27341000 27341010	Chicken or turkey, potatoes, corn, and cheese, with gravy* Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27341020	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce *
27341025	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27341030 27341035	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy* Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27341040	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27341045	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27341050	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27341055	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27341060	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27341320	Chicken or turkey stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27341510	Chicken or turkey stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27341520	Chicken or turkey stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; tomato- based sauce*
27343010	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27343020	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27343410	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27343420	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*

Food code	Food description
27343470	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27343480	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27343520	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27343950	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27345010	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; no sauce*
27345020	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; no sauce*
27345220	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27345410	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27345420	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27345440	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27345450	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27345510	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato- based sauce*
27345520	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato- based sauce*
27347210	Chicken or turkey,stuffing, and vegetables excluding carrots, broccoli, and dark green leafy; no sauce*
27347220	Chicken or turkey, stuffing, and vegetables including carrots, broccoli, and/or dark-green leafy; gravy*
27347230	Chicken or turkey, stuffing, and vegetables excluding carrots, broccoli, and dark-green leafy; gravy*
27347240	Chicken or turkey, dumplings, and vegetables including carrots, broccoli, and/or dark green leafy; gravy*
27347250	Chicken or turkey, dumplings, and vegetables excluding carrots, broccoli, and dark green leafy; gravy*
27350060	Shrimp creole, with rice*
27363000	Gumbo with rice*
27363100	Jambalaya with meat and rice*
27410210	Beef and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, no sauce*
27410220	Beef and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, no sauce*
27411100	Beef with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27411120	Swiss steak*
27411200	Beef with vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27414100	Beef with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, mushroom sauce*
27416400	Stir fried beef and vegetables in soy sauce*

Food code	Food description
27416450 27416500 27420040	Beef and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, gravy* Beef and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, gravy* Frankfurters or hot dogs and sauerkraut*
27420060 27420160	Pork and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, no sauce* Moo Shu pork, without Chinese pancake*
27420200	Pork hash*
27420250	Ham and vegetables including carrots broccoli, and/or dark- green leafy; no potatoes, no sauce*
27420350 27420400	Pork and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, no sauce* Pork and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based
	sauce*
27420410	Pork and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27420460	Sausage and vegetables, excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato- based sauce*
27430400	Lamb or mutton stew with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, gravy*
27430410	Lamb or mutton stew with vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, gravy*
27440110	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, no sauce*
27440120	Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, no sauce*
27442110	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, gravy*
27442120	Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, gravy*
27443120	Chicken or turkey a la king with vegetables excluding carrorts, broccoli, and dark-green leafy; no potatoes, cream, white, or soup-based sauce*
27443150	Chicken or turkey divan*
27445125	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27445130	Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27445180	Moo Goo Gai Pan*
27446400	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, cheese sauce*
27450250	Oysters Rockefeller*
27450400	Shrimp and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, no sauce*
27450405	Shrimp and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, no sauce*
27450450	Shrimp creole, no rice*
27450660	Shellfish mixture and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, mushroom sauce*
27450700	Fish and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27450710	Fish and vegetables excluding carrots, broccoli, and dark- green leafy; no potatoes, tomato-based sauce*

Food code	Food description
27464000	Gumbo, no rice*
27510950	Reuben sandwich, corned beef sandwich with sauerkraut and cheese, with spread*
28101000	Frozen dinner, NFS*
28110150	Beef with vegetable, diet frozen meal*
28110130	Sirloin, chopped, with gravy, mashed potatoes, vegetable, frozen meal*
28110220	Sirloin tips, with gravy, potatoes, vegetable, frozen meal*
28110230	Sirloin beef, with gravy, potatoes, vegetable, frozen meal*
28110270	Salisbury steak dinner, NFS, frozen meal*
28110300	Salisbury steak with gravy, potatoes, vegetable, frozen meal*
28110310	Salisbury steak with gravy, whipped potatoes, vegetable, dessert, frozen meal*
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert, frozen meal*
28110390	Salisbury steak, potatoes, vegetable, dessert, diet frozen meal*
28110510	Beef, sliced, with gravy, potatoes, vegetable, frozen meal*
28113140	Beef with spaetzle or rice, vegetable, frozen meal*
28140100	Chicken dinner, NFS, frozen meal*
28140320	Chicken and noodles with vegetable, dessert, frozen meal*
28140710	Chicken, fried, with potatoes, vegetable, frozen meal*
28140720	Chicken patty, or nuggets, boneless, breaded, potatoes, vegetable, frozen meal*
28140810	Chicken, fried, with potatoes, vegetable, dessert, frozen meal*
28141010	Chicken, fried, with potatoes, vegetable, dessert, frozen meal, large meat portion*
28141050	Chicken patty parmigiana, breaded, with vegetable, diet frozen meal*
28141610	Chicken and vegetables in cream or white sauce, diet frozen meal*
28143020	Chicken and vegetable entree with rice, diet frozen meal*
28143040	Chicken chow mein with rice, diet frozen meal*
28143150	Chicken and vegetable entree with noodles, diet frozen meal*
28143170	Chicken in cream sauce with noodles and vegetable, frozen meal*
28143180	Chicken in butter sauce with potatoes and vegetable, diet frozen meal*
28145100	Turkey with gravy, dressing, vegetable and fruit, diet frozen meal*
28150510	Fish in lemon-butter sauce with starch item, vegetable, frozen meal*
28154010	Shrimp and vegetables in sauce with noodles, diet frozen meal*
28160650	Stuffed green pepper, frozen meal*
28315140	Beef vegetable soup, home recipe, Mexican style*
28340590	Chicken or turkey corn soup with noodles, home recipe*
28340660	Chicken or turkey vegetable soup, home recipe*
28340670	Chicken or turkey vegetable soup with rice, home recipe, Mexican style*
28355260	Lobster gumbo*
28355440	Shrimp gumbo*
32101530	Egg curry*
41203030	Black bean salad*
41311020	Sambar, vegetable stew*
41311030	Lentil curry*
41311040	Lentil curry with rice*
41812800	Vegetarian stew*
41812850	Vegetarian stroganoff*
58100500	Enchilada, no sauce*
58100520	Enchilada with meat and beans, red-chile or enchilada sauce*

Food	Food description
code	
58100530	Enchilada with meat, red-chile or enchilada sauce*
58100620	Enchilada with chicken and beans, red-chile or enchilada sauce*
58100630	Enchilada with chicken, red-chile or enchilada sauce*
58100720	Enchilada with beans, meatless, red-chile or enchilada sauce*
58100800 58101800	Enchilada, just cheese, meatless, no beans, red-chile or enchilada sauce* Ground beef with tomato sauce and taco seasonings on a cornbread crust*
58101800	Tamale, plain, meatless, no sauce, Puerto Rican style or Carribean Style*
58103200	Tamale, meatless, with sauce, Puerto Rican or Caribbean style*
58103310	Tamale casserole with meat*
58126170	Turnover filled with meat and vegetable, no potatoes, no gravy*
58127150	Vegetables and cheese in pastry*
58146160	Pasta with vegetables, no sauce or dressing*
58160400	Rice, white, with corn, NS as to fat*
58160410	Rice, white, with corn, no added fat*
58160420	Rice, white, with corn, fat added*
58160430	Rice, white, with peas, NS as to fat*
58160440	Rice, white, with peas, no added fat*
58160450	Rice, white, with peas, fat added*
58160490 58160500	Rice, white, with peas and carrots, NS as to fat* Rice, white, with peas and carrots, no added fat*
58160500	Rice, white, with peas and carrots, fat added at Rice, white, with peas and carrots, fat added*
58160510	Rice, white, with peas and carrors, rat added Rice, white, with tomatoes and/or tomato-based sauce, NS as to fat*
58160530	Rice, white, with tomatoes and/or tomato-based sauce, no added fat*
58160540	Rice, white, with tomatoes and/or tomato-based sauce, fat added*
58160580	Rice, white, with carrots and tomatoes and/or tomato-based sauce, NS as to fat*
58160600	Rice, white, with carrots and tomatoes and/or tomato-based sauce, fat added*
58160610	Rice, white, with dark green vegetables and tomatoes and/or tomato-based sauce, NS as to fat*
58160620	Rice, white, with dark green vegetables and tomatoes and/or tomato-based sauce, no added fat*
58160630	Rice, white, with dark green vegetables and tomatoes and/or tomato-based sauce, fat added*
58160670	Rice, white, with carrots, dark green vegetables, and tomatoes and/or tomato-based sauce, NS as to
F01/0/00	fat*
58160690	Rice, white, with carrots, dark green vegetables, and tomatoes and/or tomato-based sauce, fat added*
58161325	Rice, brown, with beans and tomatoes*
58161420	Rice, brown, with corn, NS as to fat*
58161424	Rice, brown, with corn, fat added*
58161430	Rice, brown, with peas, NS as to fat*
58161432	Rice, brown, with peas, no added fat*
58161434	Rice, brown, with peas, fat added*
58161440	Rice, brown, with peas and carrots, NS as to fat*
58161442	Rice, brown, with peas and carrots, no added fat*
58161444	Rice, brown, with peas and carrots, fat added*
58161460	Rice, brown, with tomatoes and/or tomato based sauce, NS as to fat*
58161462	Rice, brown, with tomatoes and/or tomato based sauce, no added fat*
58161464	Rice, brown, with tomatoes and/or tomato based sauce, fat added*

58161480 Rice, brown, with carrots and tomatoes and/or tomato-based sauce, NS as to fat*

Food	Food description
code	
58161490	Rice, brown, with dark green vegetables and tomatoes and/or tomato-based sauce, NS as to fat*
58161524	Rice, brown, with carrots, dark green vegetables, and tomatoes and/or tomato-based sauce, fat
F01/0440	added*
58163410	Spanish rice, fat added*
58163420	Spanish rice, no added fat*
58163430	Spanish rice, NS as to fat*
58163450	Spanish rice with ground beef*
58165000	Rice, white, with vegetables, cheese and/or cream based sauce, NS as to fat*
58165010	Rice, white, with vegetables, cheese and/or cream based sauce, no added fat*
58165020	Rice, white, with vegetables, cheese and/or cream based sauce, fat added*
58165030 58165040	Rice, white, with vegetables and gravy, NS as to fat* Rice, white, with vegetables and gravy, no added fat*
58165040	Rice, white, with vegetables and gravy, no added rat Rice, white, with vegetables, soy-based sauce, NS as to fat*
58165000	Rice, white, with vegetables, soy-based sauce, no added fat*
58165080	Rice, white, with vegetables, soy-based sauce, no added at Rice, white, with vegetables, soy-based sauce, fat added*
58165400	Rice, brown, with vegetables, cheese and/or cream based sauce, NS as to fat*
58165420	Rice, brown, with vegetables, cheese and/or cream based sauce, no as to lat
58165460	Rice, brown, with vegetables, soy-based sauce, NS as to fat*
58165470	Rice, brown, with vegetables, soy-based sauce, no added fat*
58165480	Rice, brown, with vegetables, soy-based sauce, fat added*
58304010	Spaghetti and meatballs dinner, NFS, frozen meal*
58304060	Spaghetti with meat sauce, diet frozen meal*
71000100	Potato, NFS
71100100	Potato, baked, NFS
71102980	Potato, boiled, NFS
71102990	Potato, boiled, ready-to-heat
71103310	Potato, canned, fat added, NS as to fat type
71103320	Potato, canned, no added fat
71104030	Potato, roasted, NFS
71104200	Potato, roasted, ready-to-heat
71305015	Potato, scalloped, NFS
71305020	Potato, scalloped, from fast food or restaurant
71305050	Potato, scalloped, from dry mix
71305060	Potato, scalloped, from dry mix, with meat
71305070	Potato, scalloped, ready-to-heat
71400990	Potato, french fries, NFS
71401000	Potato, french fries, NS as to fresh or frozen
71401020	Potato, french fries, from frozen, baked
71401030	Potato, french fries, fast food
71401031	Potato, french fries, restaurant
71401032	Potato, french fries, from frozen, fried
71401033	Potato, french fries, school Detato, french fries, with choose, fast food / restaurant
71401039	Potato, french fries, with cheese, fast food / restaurant
71401041 71401045	Potato, french fries, with cheese, school Potato, french fries, with chili, fast food / restaurant
71401045	Potato, french fries, with chili and cheese, fast food / restaurant
71401030	ר טנמנט, ווכוונוו ווופס, שונוו נווווו מווע נוופבסב, ומסג וטטע / ופטנמעומוונ

Food	Food description
code	Detete formely files with shares
71402500	Potato, french fries, with cheese
71402510	Potato, french fries, with chili and cheese
71402520	Potato, french fries, with chili
71403020	Potato, home fries, NFS
71403030	Potato, home fries, from restaurant / fast food
71403050	Potato, home fries, ready-to-heat
71403500	Potato, home fries, with vegetables
71404000	Potato, hash brown, NFS
71404010	Potato, hash brown, from fast food
71404020	Potato, hash brown, from fast food, with cheese
71404030	Potato, hash brown, from restaurant
71404040	Potato, hash brown, from restaurant, with cheese
71404050	Potato, hash brown, from school lunch
71405030	Potato, hash brown, from dry mix
71405040	Potato, hash brown, ready-to-heat
71405050	Potato, hash brown, ready-to-heat, with cheese
71410000	Potato skins without topping
71410500	Potato skins, with cheese
71411000	Potato skins, with cheese and bacon
71501000	Potato, mashed, NFS
71501005	Potato, mashed, from fast food
71501006	Potato, mashed, from fast food, with gravy*
71501007	Potato, mashed, ready-to-heat
71501016	Potato, mashed, from restaurant
71501017	Potato, mashed, from restaurant, with gravy*
71501018	Potato, mashed, from school lunch
71501035	Potato, mashed, from dry mix, NFS
71501040	Potato, mashed, from dry mix, made with milk
71501045	Potato, mashed, from dry mix, made with milk, with cheese
71501054	Potato, mashed, from dry mix, made with milk, with gravy*
71501061	Potato, mashed, ready-to-heat, NFS
71501071	Potato, mashed, ready-to-heat, with cheese
71501075	Potato, mashed, ready-to-heat, with gravy*
71503010	Potato patty
71505000	Potato tots, NFS
71505010	Potato tots, fast food / restaurant
71505020	Potato tots, school
71505030	Potato tots, from fresh, fried or baked
71505040	Potato tots, frozen, baked
71505050	Potato tots, frozen, fried
71505060	Potato tots, frozen, NS as to fried or baked
71507035	Potato, baked, peel not eaten, with vegetables*
71508035	Potato, baked, peel eaten, with vegetables*
72107212	Collards, frozen, cooked, no added fat
72107213	Collards, canned, cooked, no added fat
72107230	Collards, frozen, cooked with oil

Food	Food description
code	Callerde frezen eselved with hytter er mernerine
72107231	Collards, frozen, cooked with butter or margarine
72107234	Collards, canned, cooked with butter or margarine Greens, frozen, cooked, no added fat
72118212	Greens, riozen, cooked, no added fat
72118213 72118222	Greens, canned, cooked, no added fat Greens, frozen, cooked, fat added
72118222	Greens, rocked, from frozen, made with oil
72110230	Kale, frozen, cooked, no added fat
72119212	Kale, cooked, from frozen, made with oil
72119230	Mustard greens, frozen, cooked, no added fat
72122212	Mustard greens, canned, cooked, no added fat
72122213	Spinach, cooked, NS as to form, NS as to fat added in cooking
72125200	Spinach, cooked, NS as to form, fat not added in cooking
72125210	Spinach, frozen, cooked, no added fat
72125212	Spinach, canned, cooked, no added fat
72125214	Spinach, cooked, NS as to form, made with oil
72125222	Spinach, frozen, cooked, fat added, NS as to fat type
72125224	Spinach, frozen, cooked with oil
72125225	Spinach, frozen, cooked with butter or margarine
72125227	Spinach, canned, cooked with oil
72125228	Spinach, canned, cooked with butter or margarine
72125232	Spinach, from frozen, creamed*
72125240	Spinach souffle*
72125250	Spinach, cooked, NS as to form, with cheese sauce*
72125253	Spinach, cooked, from canned, with cheese sauce*
72125260	Spinach and cheese casserole*
72128200	Turnip greens, cooked, NS as to form, NS as to fat added in cooking
72128203	Turnip greens, cooked, from canned, NS as to fat added in cooking
72128212	Turnip greens, frozen, cooked, no added fat
72128213	Turnip greens, canned, cooked, no added fat
72128222	Turnip greens, frozen, cooked, fat added
72128230	Turnip greens, cooked, from frozen, made with oil
72128237	Turnip greens, canned, reduced sodium, cooked, no added fat
72201200	Broccoli, cooked, NS as to form, NS as to fat added in cooking
72201202	Broccoli, cooked, from frozen, NS as to fat added in cooking
72201210	Broccoli, cooked, NS as to form, fat not added in cooking
72201212	Broccoli, frozen, cooked, no added fat
72201213	Broccoli, cooked, NS as to form, made with oil
72201214	Broccoli, cooked, NS as to form, made with butter
72201222	Broccoli, frozen, cooked, fat added, NS as to fat type
72201226	Broccoli, frozen, cooked with oil
72201227	Broccoli, frozen, cooked with butter or margarine
72201228	Broccoli, cooked, from frozen, made with margarine
72201230	Broccoli, cooked, NS as to form, with cheese sauce*
72201232 72201250	Broccoli, cooked, from frozen, with cheese sauce*
72201250	Broccoli, cooked, NS as to form, with cream sauce* Broccoli, cooked, from frozen, with cream sauce*
12201202	טוטננטוו, נטטאבע, ווטווו ווטצפוו, שונוו נופמווו saule

Food	Food description
code	
72202020	Broccoli casserole with rice*
73102200	Carrots, cooked, NS as to form, NS as to fat added in cooking
73102202	Carrots, cooked, from frozen, NS as to fat added in cooking
73102210	Carrots, cooked, NS as to form, fat not added in cooking
73102212	Carrots, frozen, cooked, no added fat
73102213	Carrots, canned, cooked, no added fat
73102214	Carrots, cooked, NS as to form, made with oil
73102215	Carrots, cooked, NS as to form, made with butter
73102222	Carrots, frozen, cooked, fat added, NS as to fat type
73102224	Carrots, frozen, cooked with oil
73102225	Carrots, frozen, cooked with butter or margarine
73102228	Carrots, canned, cooked with butter or margarine
73102229	Carrots, cooked, from canned, made with margarine
73102230	Carrots, cooked, NS as to form, creamed*
73102242	Carrots, cooked, from frozen, glazed
73102243	Carrots, cooked, from canned, glazed
73103000	Carrots, canned, low sodium, NS as to fat added in cooking
73103010	Carrots, canned, reduced sodium, cooked, no added fat
73103022	Carrots, canned, reduced sodium, cooked with butter or margarine
73103023	Carrots, canned, low sodium, made with margarine
73105000	Beet juice
73105010	Carrot juice, 100%
73111200	Peas and carrots, cooked, NS as to form, NS as to fat added in cooking
73111203	Peas and carrots, cooked, from canned, NS as to fat added in cooking
73111210	Peas and carrots, cooked, NS as to form, fat not added in cooking
73111212	Peas and carrots, frozen, cooked, no added fat
73111213	Peas and carrots, canned, cooked, no added fat
73111222	Peas and carrots, frozen, cooked, fat added
73111223	Peas and carrots, canned, cooked, fat added
73111224	Peas and carrots, cooked, NS as to form, made with oil
73111227	Peas and carrots, cooked, from fresh, made with oil
73111231	Peas and carrots, cooked, from frozen, made with butter
73111232	Peas and carrots, cooked, from frozen, made with margarine
73111235	Peas and carrots, cooked, from canned, made with margarine
73201013	Pumpkin, canned, cooked
73407050	Sweet potato, canned, no added fat
73407060	Sweet potato, canned, fat added
74201003	Tomatoes, canned, cooked
74204010	Tomatoes, NS as to form, stewed
74301100	Tomato juice, 100%
74302000	Tomato juice cocktail
74303000	Tomato and vegetable juice, 100%
74501010	Tomato aspic*
74504010	Tomato and okra, cooked, fat not added in cooking*
74504020	Tomato and okra, cooked, fat added in cooking, NS as to type of fat*
75132000	Mixed vegetable juice

Food	Food description
code	
75200100	Vegetables, NS as to type, cooked, NS as to fat added in cooking
75200110	Vegetables, NS as to type, cooked, fat not added in cooking
75200121	Vegetables, NS as to type, cooked, made with oil
75201000	Artichoke, cooked, NS as to form, NS as to fat added in cooking
75202000	Asparagus, cooked, NS as to form, NS as to fat added in cooking
75202012	Asparagus, frozen, cooked, no added fat
75202013	Asparagus, canned, cooked, no added fat
75202022	Asparagus, frozen, cooked, fat added, NS as to fat type
75202023	Asparagus, canned, cooked, fat added, NS as to fat type
75202026	Asparagus, cooked, NS as to form, made with margarine
75202032	Asparagus, frozen, cooked with butter or margarine
75202035	Asparagus, canned, cooked with butter or margarine
75203028	Bamboo shoots, cooked
75204003	Beans, lima, immature, cooked, from canned, NS as to fat added in cooking
75204010	Beans, lima, immature, cooked, NS as to form, fat not added in cooking
75204012	Lima beans, from frozen, no added fat
75204013	Beans, lima, immature, cooked, from canned, fat not added in cooking
75204022	Lima beans, from frozen, fat added
75204023	Lima beans, from canned
75204030	Beans, lima, immature, cooked, from frozen, made with oil
75204031	Beans, lima, immature, cooked, from frozen, made with butter
75204032	Beans, lima, immature, cooked, from frozen, made with margarine
75204033	Beans, lima, immature, cooked, from canned, made with oil
75204960	Beans, string, cooked, NS as to form, NS as to color, made with oil
75204966 75204967	Beans, string, cooked, from frozen, NS as to color, made with oil Beans, string, cooked, from frozen, NS as to color, made with butter
75204967	Beans, string, cooked, from canned, NS as to color, made with oil
75204909	Beans, string, cooked, from canned, NS as to color, made with butter
75204970	Beans, string, cooked, from canned, NS as to color, made with butter
75204980	Beans, string, cooked, NS as to form, NS as to color, fat added in cooking, NS as to type of fat
75204982	Beans, string, cooked, from frozen, NS as to color, fat added in cooking, NS as to type of fat
75204990	Beans, string, cooked, NS as to form, NS as to color, fat not added in cooking
75204992	Beans, string, cooked, from frozen, NS as to color, fat not added in cooking
75204993	Beans, string, cooked, from canned, NS as to color, fat not added in cooking
75205000	Beans, string, cooked, NS as to form, NS as to color, NS as to fat added in cooking
75205003	Beans, string, cooked, from canned, NS as to color, NS as to fat added in cooking
75205010	Beans, string, green, cooked, NS as to form, NS as to fat added in cooking
75205012	Beans, string, green, cooked, from frozen, NS as to fat added in cooking
75205013	Beans, string, green, cooked, from canned, NS as to fat added in cooking
75205020	Beans, string, green, cooked, NS as to form, fat not added in cooking
75205022	Green beans, frozen, cooked, no added fat
75205023	Green beans, canned, cooked, no added fat
75205030	Green beans, NS as to form, cooked
75205032	Green beans, frozen, cooked, fat added, NS as to fat type
75205033	Green beans, canned, cooked, fat added, NS as to fat type
75205041	Beans, string, green, cooked, NS as to form, made with oil

Food	Food description
code	Deepe string green easted NC as to form mode with butter
75205042	Beans, string, green, cooked, NS as to form, made with butter
75205043	Beans, string, green, cooked, NS as to form, made with margarine
75205047	Green beans, frozen, cooked with oil
75205048	Green beans, frozen, cooked with butter or margarine
75205049	Beans, string, green, cooked, from frozen, made with margarine
75205050	Green beans, canned, cooked with oil
75205051	Green beans, canned, cooked with butter or margarine
75205052	Beans, string, green, cooked, from canned, made with margarine
75205110	Beans, string, green, canned, low sodium, NS as to fat added in cooking
75205120	Green beans, canned, reduced sodium, cooked, no added fat
75205130	Green beans, canned, reduced sodium, cooked, fat added, NS as to fat type
75205131	Green beans, canned, reduced sodium, cooked with oil
75205132	Green beans, canned, reduced sodium, cooked with butter or margarine
75205133	Beans, string, green, canned, low sodium, made with margarine
75206010	Beans, string, yellow, cooked, NS as to form, fat not added in cooking
75206020	Yellow string beans, cooked
75206030	Beans, string, yellow, cooked, NS as to form, made with oil
75206037	Beans, string, yellow, cooked, from frozen, made with butter
75208013	Beets, canned, cooked, no added fat
75208020 75208023	Beets, NS as to form, cooked Beets, canned, cooked, fat added
75208023	Brussels sprouts, cooked, NS as to form, NS as to fat added in cooking
75209000	Brussels sprouts, cooked, from frozen, NS as to fat added in cooking
75209002	Brussels sprouts, frozen, cooked, no added fat
75209012	Brussels sprouts, frozen, cooked, fat added
75209022	Brussels sprouts, cooked, NS as to form, made with oil
75209050	Brussels sprouts, cooked, from frozen, made with oil
75209052	Brussels sprouts, cooked, from frozen, made with margarine
75214000	Cauliflower, cooked, NS as to form, NS as to fat added in cooking
75214000	Cauliflower, cooked, NS as to form, fat not added in cooking
75214010	Cauliflower, frozen, cooked, no added fat
75214012	Cauliflower, frozen, cooked, fat added, NS as to fat type
75214024	Cauliflower, cooked, NS as to form, made with oil
75214030	Cauliflower, frozen, cooked with oil
75214031	Cauliflower, frozen, cooked with butter or margarine
75214032	Cauliflower, cooked, from frozen, made with margarine
75216000	Corn, cooked, NS as to form, NS as to color, NS as to fat added in cooking
75216003	Corn, cooked, from canned, NS as to color, NS as to fat added in cooking
75216010	Corn, cooked, NS as to form, NS as to color, fat not added in cooking
75216012	Corn, cooked, from frozen, NS as to color, fat not added in cooking
75216013	Corn, cooked, from canned, NS as to color, fat not added in cooking
75216036	Corn, cooked, from canned, NS as to color, made with margarine
75216053	Corn, from canned, NS as to color, cream style
75216070	Corn, dried, cooked
75216100	Corn, yellow, cooked, NS as to form, NS as to fat added in cooking
75216102	Corn, yellow, cooked, from frozen, NS as to fat added in cooking
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Food	Food description
code	
75216103	Corn, yellow, cooked, from canned, NS as to fat added in cooking
75216110	Corn, yellow, cooked, NS as to form, fat not added in cooking
75216112	Corn, frozen, cooked, no added fat
75216113	Corn, canned, cooked, no added fat
75216120	Corn, NS as to form, cooked
75216122	Corn, frozen, cooked, fat added, NS as to fat type
75216123	Corn, canned, cooked, fat added, NS as to fat type
75216131	Corn, yellow, cooked, NS as to form, made with oil
75216133	Corn, yellow, cooked, NS as to form, made with margarine
75216137	Corn, frozen, cooked with oil
75216138	Corn, frozen, cooked with butter or margarine
75216139	Corn, yellow, cooked, from frozen, made with margarine
75216141	Corn, canned, cooked with oil
75216142	Corn, canned, cooked with butter or margarine
75216143	Corn, yellow, cooked, from canned, made with margarine
75216150	Corn, yellow, NS as to form, cream style
75216153 75216193	Corn, creamed*
75216193	Corn, yellow, from canned, cream style, fat added in cooking Corn, white, cooked, from frozen, fat not added in cooking
75216212	Corn, white, cooked, from canned, fat not added in cooking
75216213	Corn, white, cooked, NS as to form, made with oil
75216224	Corn, white, cooked, from frozen, made with oil
75216252	Corn, white, NS as to form, cream style
75216250	Corn, yellow, canned, low sodium, NS as to fat added in cooking
75216300	Corn, canned, reduced sodium, cooked, no added fat
75216310	Corn, canned, reduced sodium, cooked with butter or margarine
75216322	Corn, yellow, canned, low sodium, made with margarine
75210023	Mushrooms, cooked, from canned, NS as to fat added in cooking
75219013	Mushrooms, cooked, from canned, fat not added in cooking
75219023	Mushrooms, canned, cooked
75220012	Okra, frozen, cooked, no added fat
75220012	Okra, frozen, cooked, fat added
75220031	Okra, cooked, from frozen, made with oil
75220032	Okra, cooked, from frozen, made with butter
75220033	Okra, cooked, from frozen, made with margarine
75221000	Onions, cooked, NS as to form, NS as to fat added in cooking
75221002	Onions, cooked, from frozen, NS as to fat added in cooking
75221014	Onions, cooked, NS as to form, made with oil
75221015	Onions, cooked, NS as to form, made with butter
75221020	Onions, cooked, NS as to form, fat added in cooking, NS as to type of fat
75221023	Onions, cooked, from frozen, made with oil
75221030	Onions, pearl, cooked
75224010	Peas, green, cooked, NS as to form, NS as to fat added in cooking
75224012	Peas, green, cooked, from frozen, NS as to fat added in cooking
75224013	Peas, green, cooked, from canned, NS as to fat added in cooking
75224020	Peas, green, cooked, NS as to form, fat not added in cooking

Food	Food description
code	Crean name frazen analvad na addad fat
75224022	Green peas, frozen, cooked, no added fat
75224023	Green peas, canned, cooked, no added fat
75224030	Green peas, NS as to form, cooked
75224032	Green peas, frozen, cooked, fat added, NS as to fat type
75224033	Green peas, canned, cooked, fat added, NS as to fat type
75224040	Peas, green, cooked, NS as to form, made with oil
75224046	Green peas, frozen, cooked with oil
75224047	Green peas, frozen, cooked with butter or margarine
75224048	Peas, green, cooked, from frozen, made with margarine
75224050	Green peas, canned, cooked with butter or margarine
75224051	Peas, green, cooked, from canned, made with margarine
75224120	Green peas, canned, reduced sodium, cooked, no added fat
75224131	Green peas, canned, reduced sodium, cooked with oil
75224132	Green peas, canned, reduced sodium, cooked with butter or margarine
75224133	Peas, green, canned, low sodium, made with margarine
75226093	Peppers, hot, cooked, from canned, NS as to fat added in cooking*
75226103	Peppers, hot, cooked, from canned, fat not added in cooking*
75230000	Sauerkraut
75230010	Sauerkraut, cooked, fat not added in cooking
75230020	Sauerkraut, cooked, fat added in cooking
75231010	Snowpea, cooked, NS as to form, fat not added in cooking
75231012	Snowpea, frozen, cooked, no added fat
75231022	Snowpea, frozen, cooked, fat added
75231029	Snowpea, cooked, from frozen, made with oil
75231031	Snowpea, cooked, from frozen, made with margarine
75233000	Squash, summer, yellow or green, cooked, NS as to form, NS as to fat added in cooking
75233010	Squash, summer, yellow or green, cooked, NS as to form, fat not added in cooking
75233013	Summer squash, yellow or green, canned, cooked, no added fat
75233022	Summer squash, yellow or green, frozen, cooked, fat added, NS as to fat type
75233024	Squash, summer, yellow or green, cooked, NS as to form, made with oil
75233030	Summer squash, yellow or green, frozen, cooked with oil
75233031	Summer squash, yellow or green, frozen, cooked with butter or margarine
75234000	Turnip, cooked, NS as to form, NS as to fat added in cooking
75235000	Water Chesnut
75301110	Lima beans and corn, cooked, no added fat
75301120	Lima beans and corn, cooked, fat added
75301121	Beans, lima and corn, cooked, made with oil
75302080	Bean salad, yellow and/or green string beans*
75311000	Mixed vegetables, cooked, NS as to form, NS as to fat added in cooking
75311002	Mixed vegetables, cooked, from frozen, NS as to fat added in cooking
75311003	Mixed vegetables, cooked, from canned, NS as to fat added in cooking
75311010	Mixed vegetables, cooked, NS as to form, fat not added in cooking
75311012	Classic mixed vegetables, frozen, cooked, no added fat
75311013	Classic mixed vegetables, canned, cooked, no added fat
75311020	Classic mixed vegetables, NS as to form, cooked
75311022	Classic mixed vegetables, frozen, cooked, fat added, NS as to fat type

Food code	Food description
75311023	Classic mixed vegetables, canned, cooked, fat added, NS as to fat type
75311024	Mixed vegetables, cooked, NS as to form, made with oil
75311026	Mixed vegetables, cooked, NS as to form, made with margarine
75311027	Classic mixed vegetables, frozen, cooked with oil
75311028	Classic mixed vegetables, frozen, cooked with butter or margarine
75311029	Mixed vegetables, cooked, from frozen, made with margarine
75311030	Classic mixed vegetables, canned, cooked with oil
75311031	Classic mixed vegetables, canned, cooked with butter or margarine
75311100	Mixed vegetables, canned, low sodium, NS as to fat added in cooking
75311110	Classic mixed vegetables, canned, reduced sodium, cooked, no added fat
75315010	Peas and corn, cooked, no added fat
75315110	Peas and onions, cooked, fat not added in cooking
75315200	Peas and mushrooms, cooked, NS as to fat added in cooking Ratatouille*
75316050 75317000	Vegetables, stew type, cooked, NS as to fat added in cooking
75317000	Vegetables, stew type, cooked, made with oil
75317011	Vegetables, stew type, cooked, made with butter
75330050	Broccoli and cauliflower, cooked, no added fat
75330060	Broccoli and cauliflower, cooked, fat added
75330080	Broccoli, cauliflower and carrots, cooked, no added fat
75330090	Broccoli, cauliflower and carrots, cooked, fat added
75330130	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, no sauce, NS as
	to fat added in cooking
75330140	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, no sauce, fat not
	added in cooking
75330151	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, no sauce, made
75000450	with oil
75330152	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, no sauce, made with butter
75340010	Asian stir fry vegetables, cooked, no added fat
75340020	Asian stir fry vegetables, cooked, fat added
75340160	Vegetable and pasta combinations with cream or cheese sauce, broccoli, pasta, carrots, corn,
	zucchini, peppers, cauliflower, peas, etc., cooked*
75340200	Jai, Monk's Food
75401010	Asparagus, NS as to form, creamed or with cheese sauce*
75403010	Beans, string, green, NS as to form, creamed or with cheese sauce*
75403012	Beans, string, green, from frozen, creamed or with cheese sauce*
75403013	Beans, string, green, from canned, creamed or with cheese sauce*
75403022	Beans, string, green, cooked, from frozen, with mushroom sauce*
75409010	Cauliflower, NS as to form, creamed*
75411010	Corn, scalloped or pudding*
75411020	Corn fritter*
75411032 75414010	Corn, cooked, from frozen, with cream sauce, made with milk* Mushrooms, NS as to form, creamed*
75414010	Mushrooms, from canned, creamed*
75414013	Fried okra*
10111000	

Food	Food description
code	
75415010	Onions, NS as to form, creamed*
75415022	Fried onion rings*
75416600	Pea salad with cheese*
75417010	Peas, NS as to form, creamed*
75417012	Peas, from frozen, creamed*
75417022	Peas, cooked, from frozen, with mushroom sauce*
75417032	Peas, cooked, from frozen, with tomato sauce*
75439010	Vegetable stew without meat*
75440310	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with tomato sauce*
75440510	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with cheese sauce*
75440600	Vegetable curry*
75440610	Vegetable curry with rice*
75450510	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, with cream sauce*
75460710	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with pasta*
75500210	Beets, pickled
75501010	Relish, corn
75503085	Ginger root, pickled
75510000	Olives, NFS
75510010	Olives, green
75510020	Olives, black
75510030	Olives, stuffed
75510050	Olive tapenade
75511040	Pepper, hot, pickled
75649110	Vegetable soup, home recipe*
75649150	Vegetable noodle soup, home recipe*
75651000	Minestrone soup, home recipe*
75652010	Vegetable beef soup, home recipe*
75652040	Vegetable beef soup with noodles or pasta, home recipe*
75652050	Vegetable beef soup with rice, home recipe*
77316600	Eggplant and meat casserole*
93301030	Bloody Mary*
RTD and R	'TM coffee/tea
92100000	Coffee, NS as to type
92100500	Coffee, NS as to brewed or instant
92103000	Coffee, instant, reconstituted
92104000	Coffee, instant, 50% less caffeine, reconstituted
92111000	Coffee, NS as to brewed or instant, decaffeinated
92114000	Coffee, instant, decaffeinated, reconstituted
92121000	Coffee, instant, pre-lightened and pre-sweetened with sugar, reconstituted*
92121001	Coffee, instant, decaffeinated, pre-lightened and pre-sweetened with sugar, reconsitituted*
92121010	Coffee, instant, pre-sweetened with sugar, reconstituted
92121020	Coffee, mocha, instant, pre-lightened and pre-sweetened with sugar, reconstituted*
92121030	Coffee, mocha, instant, pre-lightened and pre-sweetened with low calorie sweetener, reconstituted
92121040	Coffee, instant, pre-lightened and pre-sweetened with low calorie sweetener, reconstituted*

Food	Food description
cod e 92121041	Coffee, instant, decaffeinated, pre-lightened and pre-sweetened with low calorie sweetener,
72121041	reconstituted*
92171000	Coffee, bottled/canned
92171010	Coffee, bottled/canned, light
92191100	Coffee, instant, not reconstituted**
92191200	Coffee, instant, decaffeinated, not reconstituted**
92191400	Coffee, instant, pre-sweetened with sugar, not reconstituted**
92193000	Coffee, instant, pre-lightened and pre-sweetened with sugar, not reconstituted**
92203000	Cereal beverage
92305010	Tea, iced, instant, black, unsweetened
92305040	Tea, iced, instant, black, pre-sweetened with sugar
92305050	Tea, iced, instant, black, decaffeinated, pre-sweetened with sugar
92305090	Tea, iced, instant, black, pre-sweetened with low calorie sweetener
92305110	Tea, iced, instant, black, decaffeinated, pre-sweetened with low calorie sweetener
92305180	Tea, iced, instant, black, decaffeinated, unsweetened
92305900	Tea, iced, instant, green, unsweetened
92305910	Tea, iced, instant, green, pre-sweetened with sugar
92305920	Tea, iced, instant, green, pre-sweetened with low calorie sweetener
92307000	Tea, iced, instant, black, unsweetened, dry**
92307400	Tea, iced, instant, black, pre-sweetened, dry**
92307500	Iced Tea / Lemonade juice drink
92307510	Iced Tea / Lemonade juice drink, light
92307520	Iced Tea / Lemonade juice drink, diet
92309000	Tea, iced, bottled, black
92309010	Tea, iced, bottled, black, decaffeinated
92309020	Tea, iced, bottled, black, diet
92309030	Tea, iced, bottled, black, decaffeinated, diet
92309040	Tea, iced, bottled, black, unsweetened
92309050	Tea, iced, bottled, black, decaffeinated, unsweetened
92309500	Tea, iced, bottled, green
92309510	Tea, iced, bottled, green, diet
92309520	Tea, iced, bottled, green, unsweetened
	replacements
95101000	Nutritional drink or shake, ready-to-drink (Boost)
95101010	Nutritional drink or shake, ready-to-drink (Boost Plus)
95102000	Nutritional drink or shake, ready-to-drink (Carnation Instant Breakfast)
95103000	Nutritional drink or shake, ready-to-drink (Ensure)
95103010 95104000	Nutritional drink or shake, ready-to-drink (Ensure Plus) Nutritional drink or shake, ready-to-drink, sugar free (Glucerna)
95104000 95105000	Nutritional drink of shake, ready-to-drink, sugar free (Gidcerna) Nutritional drink or shake, ready-to-drink (Kellogg's Special K Protein)
95105000	Nutritional drink of shake, ready-to-drink (Neilogy's Special N Protein) Nutritional drink or shake, ready-to-drink (Muscle Milk)
95106000	Nutritional drink of shake, ready-to-drink, light (Muscle Milk)
95100010	Nutritional drink of shake, ready-to-drink, light (Mascle Milk) Nutritional drink or shake, ready-to-drink (Slim Fast)
95110000	Nutritional drink or shake, ready-to-drink, sugar free (Slim Fast)
95110010	Nutritional drink or shake, high protein, ready-to-drink (Slim Fast)
95120000	Nutritional drink or shake, ready-to-drink, NFS
,0120000	

Food	Food description
cod e 95120010	Nutritional drink or shake, high protein, ready-to-drink, NFS
95120010	Nutritional drink or shake, high protein, light, ready-to-drink, NFS
95120020	Nutritional drink of shake, liquid, soy-based
RTE cereal	
57000100	Cereal, oat, NFS
57100100	Cereal, ready-to-eat, NFS
57101000	Cereal (Kellogg's All-Bran)
57103000	Cereal (Post Alpha-Bits)
57103100	Cereal (General Mills Cheerios Apple Cinnamon)
57104000	Cereal (Kellogg's Apple Jacks)
57106050	Cereal (Post Great Grains Banana Nut Crunch)
57106060	Cereal (General Mills Cheerios Banana Nut)
57106100	Cereal (General Mills Basic 4)
57106250	Cereal (General Mills Kix Berry Berry)
57106260	Cereal (General Mills Cheerios Berry Burst)
57107000	Cereal (General Mills Boo Berry)
57110000	Cereal (Kellogg's All-Bran Bran Buds)
57117000	Cereal (Quaker Cap'n Crunch)
57117500	Cereal (Quaker Christmas Crunch)
57119000	Cereal (Quaker Cap'n Crunch's Crunchberries)
57120000	Cereal (Quaker Cap'n Crunch's Peanut Butter Crunch)
57123000	Cereal (General Mills Cheerios)
57124030	Cereal (General Mills Chex Chocolate)
57124050	Cereal (General Mills Chex Cinnamon)
57124100	Cereal (General Mills Cheerios Chocolate)
57124200	Cereal, chocolate flavored, frosted, puffed corn
57124300	Cereal (General Mills Lucky Charms Chocolate)
57125000	Cereal (General Mills Cinnamon Toast Crunch)
57125010	Cereal (General Mills 25% Less Sugar Cinnamon Toast Crunch)
57125900	Cereal (General Mills Honey Nut Clusters)
57126000	Cereal (Kellogg's Cocoa Krispies)
57127000	Cereal (Post Cocoa Pebbles)
57128000	Cereal (General Mills Cocoa Puffs)
57128005	Cereal (General Mills 25% Less Sugar Cocoa Puffs)
57130000	Cereal (General Mills Cookie Crisp)
57132000	Cereal (General Mills Chex Corn)
57134000	Cereal, corn flakes
57135000	Cereal (Kellogg's Corn Flakes)
57137000	Cereal, corn puffs
57139000	Cereal (General Mills Count Chocula)
57143000	Cereal (Kellogg's Cracklin' Oat Bran)
57143500	Cereal (Post Great Grains, Cranberry Almond Crunch)
57148000	Cereal (Kellogg's Crispix)
57148500	Cereal, crispy brown rice
57151000	Cereal, crispy rice
57201900	Cereal (General Mills Dora The Explorer)

Food	Food description
code	
57206700	Cereal (General Mills Fiber One)
57206710	Cereal (General Mills Fiber One Honey Clusters)
57206715	Cereal (General Mills Fiber One Raisin Bran Clusters)
57207000	Cereal, bran flakes
57208000	Cereal (Kellogg's All-Bran Complete Wheat Flakes)
57209000	Cereal (Post Bran Flakes)
57211000	Cereal (General Mills Frankenberry)
57213000	Cereal (Kellogg's Froot Loops)
57213010	Cereal (Kellogg's Froot Loops Marshmallow)
57213850	Cereal (General Mills Cheerios Frosted)
57214000	Cereal (Kellogg's Frosted Mini-Wheats)
57218000	Cereal (Kellogg's Frosted Krispies)
57221700	Cereal, fruit rings
57221810	Cereal (General Mills Cheerios Fruity)
57223000	Cereal (Post Fruity Pebbles)
57224000	Cereal (General Mills Golden Grahams)
57227000	Cereal, granola
57228000	Granola, homemade
57229000	Cereal (Kellogg's Low Fat Granola)
57229500	Cereal (Kellogg's Low Fat Granola with Raisins)
57230000	Cereal (Post Grape-Nuts)
57231000	Cereal (Post Grape-Nuts Flakes)
57231200	Cereal (Post Great Grains Raisins, Dates, and Pecans)
57231250	Cereal (Post Great Grains Double Pecan Whole Grain Cereal)
57237100	Cereal (Post Honey Bunches of Oats Honey Roasted)
57237200	Cereal (Post Honey Bunches of Oats with Vanilla Bunches)
57237300	Cereal (Post Honey Bunches of Oats with Almonds)
57237900	Cereal (Post Honey Bunches of Oats Just Bunches)
57238000	Cereal (Post Honeycomb)
57240100	Cereal (General Mills Chex Honey Nut)
57241000	Cereal (General Mills Cheerios Honey Nut)
57241200	Cereal (Post Shredded Wheat Honey Nut)
57243000	Cereal (Kellogg's Honey Smacks)
57301500	Cereal (Kashi 7 Whole Grain Puffs)
57301505	Cereal (Kashi Autumn Wheat)
57301510	Cereal (Kashi GOLEAN)
57301511	Cereal (Kashi GOLEAN Crunch)
57301512	Cereal (Kashi GOLEAN Crunch Honey Almond Flax)
57301530	Cereal (Kashi Heart to Heart Honey Toasted Oat)
57303100	Cereal (General Mills Kix)
57303105	Cereal (General Mills Honey Kix)
57303200	Cereal (Kellogg's Krave)
57304100	Cereal (Quaker Life)
57305100	Cereal (General Mills Lucky Charms)
57305150	Cereal, frosted oat cereal with marshmallows
57305160	Cereal (Malt-O-Meal Blueberry Muffin Tops)

Food	Food description
code	
57305165	Cereal (Malt-O-Meal Cinnamon Toasters)
57305170	Cereal (Malt-O-Meal Coco-Roos)
57305174	Cereal (Malt-O-Meal Colossal Crunch)
57305175	Cereal (Malt-O-Meal Cocoa Dyno-Bites)
57305180	Cereal (Malt-O-Meal Corn Bursts)
57305200	Cereal (Malt-O-Meal Crispy Rice)
57305210	Cereal (Malt-O-Meal Frosted Flakes)
57305215	Cereal (Malt-O-Meal Frosted Mini Spooners)
57305300	Cereal (Malt-O-Meal Fruity Dyno-Bites)
57305400	Cereal (Malt-O-Meal Honey Graham Squares)
57305500	Cereal (Malt-O-Meal Honey Nut Toasty O's)
57305600	Cereal (Malt-O-Meal Marshmallow Mateys)
57306130 57306500	Cereal (Malt-O-Meal Raisin Bran)
	Cereal (Malt-O-Meal Golden Puffs)
57306700	Cereal (Malt-O-Meal Toasted Oat Cereal)
57306800 57307500	Cereal (Malt-O-Meal Tootie Fruities) Cereal, millet, puffed
57308190	Cereal, muesli
57308190	Cereal (General Mills Cheerios Multigrain)
57308400	Cereal (Nature Valley Granola)
57316300	Cereal (Health Valley Oat Bran Flakes)
57316380	Cereal (General Mills Cheerios Oat Cluster Crunch)
57316385	Cereal (General Mills Cheerios Dat Cluster Clutch)
57316450	Cereal (General Mills Oatmeal Crisp with Almonds)
57316450	Cereal (Quaker Honey Graham Oh's)
57320500	Cereal (Quaker Granola with Oats, Honey, and Raisins)
57321900	Cereal (Nature's Path Organic Flax Plus)
57326000	Cereal (Barbara's Puffins)
57327450	Cereal (Quaker Toasted Oat Bran)
57327500	Cereal (Quaker Oatmeal Squares)
57329000	Cereal, raisin bran
57330000	Cereal (Kellogg's Raisin Bran)
57330010	Cereal (Kellogg's Raisin Bran Crunch)
57331000	Cereal (Post Raisin Bran)
57332050	Cereal (General Mills Total Raisin Bran)
57332100	Cereal (General Mills Raisin Nut Bran)
57335550	Cereal (General Mills Reese's Puffs)
57336000	Cereal (General Mills Chex Rice)
57337000	Cereal, rice flakes
57339000	Cereal (Kellogg's Rice Krispies)
57339500	Cereal (Kellogg's Rice Krispies Treats Cereal)
57340000	Cereal, puffed rice
57341000	Cereal (Post Shredded Wheat'n Bran)
57341200	Cereal (Kellogg's Smart Start Strong)
57341300	Cereal (Kellogg's Smorz)
57344000	Cereal (Kellogg's Special K)

Food	Food description
code	
57344001	Cereal (Kellogg's Special K Blueberry)
57344005	Cereal (Kellogg's Special K Chocolatey Delight)
57344007	Cereal (Kellogg's Special K Low Fat Granola)
57344010	Cereal (Kellogg's Special K Red Berries)
57344015	Cereal (Kellogg's Special K Fruit & Yogurt)
57344020	Cereal (Kellogg's Special K Vanilla Almond)
57344025	Cereal (Kellogg's Special K Cinnamon Pecan)
57347000	Cereal (Kellogg's Corn Pops)
57348000	Cereal, frosted corn flakes
57349000	Cereal (Kellogg's Frosted Flakes)
57355000	Cereal (Post Golden Crisp)
57401100	Cereal, toasted oat
57406100	Cereal (General Mills Total)
57407100	Cereal (General Mills Trix)
57407110	Cereal (General Mills 25% Less Sugar Trix)
57408100 57410000	Cereal (Uncle Sam) Cereal (Weetabix Whole Grain)
57410000	Cereal (General Mills Chex Wheat)
57411000	Cereal, puffed wheat, plain
57416000	Cereal, puffed wheat, sweetened
57417000	Cereal (Post Shredded Wheat)
57418000	Cereal (General Mills Wheaties)
Salad dress	
14640026	Cheese sandwich, American cheese, on white bread, with mayonnaise*
14640028	Cheese sandwich, American cheese, on wheat bread, with mayonnaise*
14640030	Cheese sandwich, American cheese, on whole wheat bread, with mayonnaise*
14640032	Cheese sandwich, Cheddar cheese, on white bread, with mayonnaise*
14640034	Cheese sandwich, Cheddar cheese, on wheat bread, with mayonnaise*
14640036	Cheese sandwich, Cheddar cheese, on whole wheat bread, with mayonnaise*
14640042	Cheese sandwich, reduced fat American cheese, on whole wheat bread, with mayonnaise*
14640046	Cheese sandwich, reduced fat Cheddar cheese, on wheat bread, with mayonnaise*
14640048	Cheese sandwich, reduced fat Cheddar cheese, on whole wheat bread, with mayonnaise*
14670000	Mozzarella cheese, tomato, and basil, with oil and vinegar dressing*
27220080	Ham croquette*
27246300	Chicken or turkey cake, patty, or croquette*
27250040	Crab cake*
27250070	Salmon cake or patty*
27250160	Tuna cake or patty*
27250400	Shrimp cake or patty*
27416250	Beef salad*
27420020	Ham or pork salad*
27446200	Chicken or turkey salad, made with mayonnaise*
27446205	Chicken or turkey salad with nuts and/or fruits*
27446220	Chicken or turkey salad with egg*
27446225	Chicken or turkey salad, made with light mayonnaise*
27446230	Chicken or turkey salad, made with mayonnaise-type salad dressing*

Food code	Food description
27446235	Chicken or turkey salad, made with light mayonnaise-type salad dressing*
27446235	Chicken or turkey salad, made with right mayonnaise-type salad dressing
27446245	Chicken or turkey salad, made with light creamy dressing*
27446245	Chicken or turkey salad, made with any type of fat free dressing*
27440200	Crab salad*
27450010	Lobster salad*
27450020	Tuna salad, made with mayonnaise*
27450061	Tuna salad, made with light mayonnaise*
27450062	Tuna salad, made with mayonnaise-type salad dressing*
27450063	Tuna salad, made with light mayonnaise-type salad dressing*
27450064	Tuna salad, made with creamy dressing*
27450066	Tuna salad, made with Italian dressing*
27450068	Tuna salad, made with any type of fat free dressing*
27450070	Shrimp salad*
27450080	Seafood salad*
27450090	Tuna salad with cheese*
27450100	Tuna salad with egg*
27450130	Crab salad made with imitation crab*
27500050	Sandwich, NFS*
27500100	Meat sandwich, NFS*
27510000	Beef sandwich, NFS*
27510145	Cheeseburger, 1 miniature patty, with condiments, on miniature bun, from fast food / restaurant*
27510165	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510171	Whopper Jr with cheese (Burger King)*
27510175	Cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant (Wendy's Jr.
	Cheeseburger Deluxe)*
27510205	Cheeseburger, 1 small patty, with condiments, on white bun*
27510206	Cheeseburger, 1 small patty, with condiments, on wheat bun*
27510207	Cheeseburger, 1 small patty, with condiments, on whole wheat bun*
27510225	Cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510235	Cheeseburger submarine sandwich with lettuce, tomato and spread*
27510251	Cheeseburger, 1 medium patty, with condiments, on white bun*
27510252	Cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510253	Cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510266	Cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510276	Bacon cheeseburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510312	Bacon cheeseburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510341	Bacon cheeseburger, 1 medium patty, with condiments, on white bun*
27510342	Bacon cheeseburger, 1 medium patty, with condiments, on wheat bun*
27510343	Bacon cheeseburger, 1 medium patty, with condiments, on whole wheat bun*
27510346	Bacon cheeseburger, 1 large patty, with condiments, on bun, from fast food / restaurant*
27510376	Double cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant*
27510406	Double cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510431	Double bacon cheeseburger, 2 small patties, with condiments, on bun, from fast food / restaurant
07510454	(Burger King Bacon Double Cheeseburger)*
27510451	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*

Food code	Food description
27510465	Double bacon cheeseburger, 2 medium patties, with condiments, on bun, from fast food / restaurant (Wendy's Baconator)*
27510475	Double bacon cheeseburger, 2 large patties, with condiments, on bun, from fast food / restaurant*
27510486	Triple cheeseburger, 3 medium patties, with condiments, on bun, from fast food / restaurant*
27510506	Hamburger, 1 miniature patty, with condiments, on miniature bun, from fast food / restaurant*
27510536	Hamburger, 1 small patty, with condiments, on bun, from fast food / restaurant*
27510552	Whopper Jr (Burger King)*
27510585	Hamburger, 1 small patty, with condiments, on white bun*
27510587	Hamburger, 1 small patty, with condiments, on whole wheat bun*
27510606	Hamburger, 1 medium patty, with condiments, on bun, from fast food / restaurant*
27510641	Hamburger, 1 medium patty, with condiments, on white bun*
27510642	Hamburger, 1 medium patty, with condiments, on wheat bun*
27510643	Hamburger, 1 medium patty, with condiments, on whole wheat bun*
27510667	Double hamburger, 2 small patties, with condiments, on bun, from fast food / restaurant*
27510676	Double hamburger, 2 medium patties, with condiments, on bun, from fast food / restaurant*
27510950	Reuben sandwich, corned beef sandwich with sauerkraut and cheese, with spread*
27513040 27513041	Roast beef submarine sandwich, with lettuce, tomato and spread*
27515041 27516010	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread* Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread*
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread*
27520155	Bacon, lettuce, and tomato sandwich with spread*
27520155	Bacon, lettuce, and tomato submarine sandwich, with spread*
27520155	Bacon, lettuce, tomato, and cheese submarine sandwich, with spread*
27520160	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread*
27520166	Bacon, breaded fried chicken fillet, and tomato club sandwich with cheese, lettuce and spread*
27520310	Ham sandwich with lettuce and spread*
27520320	Ham and cheese sandwich, with lettuce and spread*
27520350	Ham and cheese sandwich, with spread, grilled*
27520370	Hot ham and cheese sandwich, on bun*
27520390	Ham and cheese submarine sandwich, with lettuce, tomato and spread*
27520410	Cuban sandwich, with spread*
27540110	Sliced chicken sandwich, with spread*
27540111	Sliced chicken sandwich, with cheese and spread*
27540120	Chicken salad or chicken spread sandwich*
27540150	Chicken fillet, breaded, fried, sandwich with lettuce, tomato and spread*
27540151	Chicken fillet, breaded, fried, sandwich with cheese, lettuce, tomato and spread*
27540170	Chicken patty sandwich, miniature, with spread*
27540190	Chicken patty sandwich, with lettuce and spread*
27540235	Chicken fillet, broiled, sandwich with lettuce, tomato, and spread*
27540240 27540280	Chicken fillet, broiled, sandwich, on whole wheat roll, with lettuce, tomato and spread* Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread*
27540280	Chicken, bacon, and tomato club sandwich, with lettuce and spread*
27540285	Chicken submarine sandwich, with lettuce, tomato and spread*
27540290	Chicken submarine sandwich, with cheese, lettuce, tomato and spread*
27540295	Buffalo chicken submarine sandwich*
27540296	Buffalo chicken submarine sandwich with cheese*
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Food	Food description
code	
27540310	Turkey sandwich, with spread*
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread*
27540360	Turkey and bacon submarine sandwich, with lettuce, tomato and spread*
27540361	Turkey and bacon submarine sandwich, with cheese, lettuce, tomato and spread*
27541000	Turkey, ham, and roast beef club sandwich, with lettuce, tomato and spread*
27541001	Turkey, ham, and roast beef club sandwich with cheese, lettuce, tomato, and spread*
27545010	Turkey or chicken burger, with condiments, on bun, from fast food / restaurant*
27545200	Turkey or chicken burger, with condiments, on white bun*
27545210	Turkey or chicken burger, with condiments, on wheat bun* Turkey or chicken burger, with condiments, on whole wheat bun*
27545220 27550110	Crab cake sandwich*
27550110	Salmon cake sandwich*
27550720	Tuna salad sandwich, on bread*
27550720	Tuna salad sandwich, on bread, with cheese*
27550730	Tuna salad sandwich, on bun*
27550740	Tuna salad sandwich, on bun, with cheese*
27550745	Tuna salad wrap sandwich*
27550800	Seafood salad sandwich*
27560120	Bologna and cheese sandwich, with spread*
27560500	Pepperoni and salami submarine sandwich, with lettuce, tomato and spread*
27560910	Cold cut sumarine sandwich, with cheese, lettuce, tomato and spread*
32103000	Egg salad, made with mayonnaise*
32103015	Egg salad, made with light mayonnaise*
32103020	Egg salad, made with mayonnaise-type salad dressing*
32103025	Egg salad, made with light mayonnaise-type salad dressing*
32103050	Egg Salad, made with any type of fat free dressing*
32202025	Egg, cheese and ham on bagel*
41203030	Black bean salad*
58127500	Vegetable submarine sandwich, with fat free spread*
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing*
58148110	Macaroni or pasta salad, made with mayonnaise*
58148111	Macaroni or pasta salad, made with light mayonnaise*
58148112	Macaroni or pasta salad, made with mayonnaise-type salad dressing*
58148114	Macaroni or pasta salad, made with Italian dressing*
58148117	Macaroni or pasta salad, made with light creamy dressing*
58148118	Macaroni or pasta salad, made with any type of fat free dressing*
58148120	Macaroni or pasta salad with egg*
58148130	Macaroni or pasta salad with tuna*
58148150	Macaroni or pasta salad with shrimp*
58148160	Macaroni or pasta salad with tuna and egg*
58148170	Macaroni or pasta salad with chicken*
58148180	Macaroni or pasta salad with cheese*
58148550	Macaroni or pasta salad with meat*
63401010	Apple salad with dressing*
63402950	Fruit salad, excluding citrus fruits, with salad dressing or mayonnaise*
63402980	Fruit salad, excluding citrus fruits, with marshmallows*

Food	Food description
cod e 63403040	Fruit called including citrus fruits with marchmallows*
71600950	Fruit salad, including citrus fruits, with marshmallows* Potato salad with egg, from restaurant*
71600950	Potato salad with egg, made with mayonnaise*
71601010	Potato salad with egg, made with light mayonnaise*
71601015	Potato salad with egg, made with mayonnaise-type salad dressing*
71601020	Potato salad with egg, made with light mayonnaise-type salad dressing
71601025	Potato salad with egg, made with light creamy dressing*
71601050	Potato salad with egg, made with any type of fat free dressing*
71602950	Potato salad, from restaurant*
71603010	Potato salad, made with mayonnaise*
71603015	Potato salad, made with light mayonnaise*
71603020	Potato salad, made with mayonnaise-type salad dressing*
71603050	Potato salad, made with any type of fat free dressing*
73101110	Carrots, raw, salad*
73101210	Carrots, raw, salad with apples*
74701000	Tomato sandwich*
75140500	Broccoli salad with cauliflower, cheese, bacon bits, and dressing*
75140510	Broccoli slaw salad*
75141000	Cabbage salad or coleslaw, made with coleslaw dressing*
75141005	Cabbage salad or coleslaw, made with light coleslaw dressing*
75141020	Cabbage salad or coleslaw, made with Italian dressing*
75141025	Cabbage salad or coleslaw, made with light Italian dressing*
75141030	Cabbage salad or coleslaw, made with creamy dressing*
75141035	Cabbage salad or coleslaw, made with light creamy dressing*
75141040	Cabbage salad or coleslaw, made with any type of fat free dressing*
75141100	Cabbage salad or coleslaw with apples and/or raisins, with dressing*
75141200	Cabbage salad or coleslaw with pineapple, with dressing*
75142500	Cucumber salad, made with sour cream dressing*
75142550	Cucumber salad, made with Italian dressing*
75302080	Bean salad, yellow and/or green string beans*
75416600	Pea salad with cheese*
81302040	Sandwich spread
81308100	Fry sauce
83100100 83100200	Salad dressing, NFS, for salads Salad dressing, NFS, for sandwiches
83100200	Blue or roquefort cheese dressing
83101000	Caesar dressing
83102000	Coleslaw dressing
83104000	French or Catalina dressing
83105500	Honey mustard dressing
83106000	Italian dressing, made with vinegar and oil
83107000	Mayonnaise, regular
83108000	Vegan mayonnaise
83109000	Russian dressing
83110000	Mayonnaise-type salad dressing
83112000	Avocado dressing
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Food	Food description
code	
83112500	Creamy dressing
83112950	Poppy seed dressing
83112990	Sesame dressing
83114000	Thousand Island dressing
83115000	Yogurt dressing
83200100	Salad dressing, light, NFS
83201000	Blue or roquefort cheese dressing, light
83202020	French or Catalina dressing, light
83203000	Caesar dressing, light
83204000	Mayonnaise, light
83204030	Mayonnaise, reduced fat, with olive oil
83204050	Mayonnaise-type salad dressing, light
83204500	Honey mustard dressing, light
83205450	Italian dressing, light
83206500	Sesame dressing, light
83207000	Thousand Island dressing, light
83210100	Creamy dressing, light
83300100	Blue or roquefort cheese dressing, fat free
83300200	Caesar dressing, fat free
83300300	Creamy dressing, fat free
83300400	French or Catalina dressing, fat free
83300500	Honey mustard dressing, fat free
83300600	Italian dressing, fat free
83300700	Mayonnaise, fat free
83300900	Salad dressing, fat free, NFS
83301000	Thousand Island dressing, fat free
Sauces	
14620300	Topping from cheese pizza*
14620310	Topping from vegetable pizza*
14620320	Topping from meat pizza*
14620330	Topping from meat and vegetable pizza*
14650100	Cheese sauce
14650150	Cheese sauce made with lowfat cheese
14650160	Alfredo sauce
21304210	Beef, shortribs, barbecued, with sauce, lean and fat eaten*
21304220	Beef, shortribs, barbecued, with sauce, lean only eaten*
22701030	Pork, spareribs, barbecued, with sauce, NS as to fat eaten*
22701040	Pork, spareribs, barbecued, with sauce, lean and fat eaten*
22701050	Pork, spareribs, barbecued, with sauce, lean only eaten*
24103070	Chicken, NS as to part, grilled with sauce, NS as to skin eaten*
24103075	Chicken, NS as to part, grilled with sauce, skin eaten*
24103080	Chicken, NS as to part, grilled with sauce, skin not eaten*
24123310	Chicken breast, grilled with sauce, skin eaten*
24123311	Chicken breast, grilled with sauce, skin not eaten*
24134150	Chicken leg, drumstick and thigh, grilled with sauce, skin eaten*
24134151	Chicken leg, drumstick and thigh, grilled with sauce, skin not eaten*
	0

Food	Food description
code	
24142510	Chicken drumstick, grilled with sauce, skin eaten*
24142511	Chicken drumstick, grilled with sauce, skin not eaten*
24154020	Chicken thigh, grilled with sauce, skin eaten*
24154021	Chicken thigh, grilled with sauce, skin not eaten*
24164010	Chicken wing, grilled with sauce*
24168001	Chicken "wings" with other sauces or seasoning, from fast food / restaurant*
24168011	Chicken "wings" with other sauces or seasoning, from precooked*
24168021	Chicken "wings" with other sauces or seasoning, from other sources*
24209000	Turkey with barbecue sauce, skin eaten*
24209001	Turkey with barbecue sauce, skin not eaten*
27111000	Beef with tomato-based sauce*
27111300	Beef stew, no potatoes, tomato-based sauce, Mexican style*
27111310	Beef stew, no potatoes, tomato-based sauce, with chili peppers, Mexican style*
27111400	Chili con carne, NS as to beans*
27111406	Chili con carne with beans, home recipe*
27111410	Chili con carne with beans*
27111500	Beef sloppy joe, no bun*
27113000	Beef with cream or white sauce*
27113200	Creamed chipped or dried beef*
27113300	Swedish meatballs with cream or white sauce*
27116100	Beef curry*
27116110	Beef curry with rice*
27116200	Beef with barbecue sauce*
27116300	Beef with sweet and sour sauce*
27118120	Stewed seasoned ground beef, Puerto Rican style*
27118130	Stewed dried beef, Puerto Rican style*
27118180	Beef stew, meat with gravy, no potatoes, Puerto Rican style*
27120030	Ham or pork with barbecue sauce*
27120060	Sweet and sour pork*
27120100	Ham or pork with tomato-based sauce*
27120110 27120130	Sausage with tomato-based sauce*
	Pork stew, no potatoes, tomato-based sauce, Mexican style*
27120250 27121410	Frankfurters or hot dogs with tomato-based sauce* Chili con carne with beans, made with pork*
27121410	Veal parmigiana*
27136050	Venison or deer with tomato-based sauce*
27130030	Spaghetti sauce with poultry
27141030	Spaghetti sauce with poultry and added vegetables
27141055	Stewed chicken with tomato-based sauce, Mexican style*
27141500	Chili con carne with chicken or turkey and beans*
27143000	Chicken or turkey with cream sauce*
27146011	Chicken, shredded or pulled, with barbecue sauce*
27146100	Sweet and sour chicken or turkey*
27146110	Sweet and sour chicken or turkey, without vegetables*
27146150	Chicken curry*
27146155	Chicken curry with rice*
	2

Food	Food description
cod e 27146200	Chickon or turkov with choose source*
27146200	Chicken or turkey with cheese sauce* Chicken or turkey parmigiana*
27150110	Shrimp cocktail*
27150140	Seafood sauce
27150151	Spaghetti sauce with seafood
27150155	Spaghetti sauce with seafood and added vegetables
27150170	Sweet and sour shrimp*
27150310	Fish with tomato-based sauce*
27150320	Fish curry*
27150325	Fish curry with rice*
27150330	Mussels with tomato-based sauce*
27160010	Meat with barbecue sauce, NS as to type of meat*
27162010	Meat with tomato-based sauce*
27162040	Spaghetti sauce with meat
27162060	Spaghetti sauce with meat and added vegetables
27211100	Beef stew with potatoes, tomato-based sauce*
27211110	Beef stew with potatoes, tomato-based sauce, Mexican style*
27211500 27212050	Beef and potatoes with cheese sauce* Beef and macaroni with cheese sauce*
27212030	Beef and noodles with cream or white sauce*
27212300	Beef and rice with tomato-based sauce*
27213100	Beef and rice with cheese sauce*
27213000	Meat loaf made with beef, with tomato-based sauce*
27214110	Beef stew with potatoes, Puerto Rican style*
27218210	Stewed corned beef, Puerto Rican style*
27210310	Pork and rice with tomato-based sauce*
27220110	
27220120	Sausage and rice with tomato-based sauce* Sausage and rice with cheese sauce*
27220170	Ham or pork and potatoes with cheese sauce*
27220520	Pork stew, with potatoes, tomato-based sauce, Mexican style*
27242300	Chicken or turkey and noodles with cream or white sauce*
27242300	Chicken or turkey and noodles with cheese sauce*
27242310	Chicken or turkey and noodles with tomato-based sauce*
27242400	Chicken or turkey and rice with cream sauce*
27243500	Chicken or turkey and rice with tomato-based sauce*
27246505	Meat loaf made with chicken or turkey, with tomato-based sauce*
27250126	Shrimp and noodles with cream or white sauce*
27250120	Shrimp and noodles with cheese sauce*
27250130	Shrimp and noodles with tomato sauce*
27250610	Tuna noodle casserole with cream or white sauce*
27250810	Fish and rice with tomato-based sauce*
27260100	Meat loaf made with beef and pork, with tomato-based sauce*
27200100	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce,
21311010	white sauce, or mushroom sauce*
27311620	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white
21311020	sauce, or mushroom sauce*

Food code	Food description
27311625	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27311630	Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27311635 27311640	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce* Beef, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27313210	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27313220	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27315210	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27315220	Beef, rice, and vegetables excluding carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27315250	Stuffed cabbage rolls with beef and rice*
27315340	Beef, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27320080	Sausage, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27320100	Pork, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27320110	Pork, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27320350	Pork, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27330210	Lamb or mutton stew with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27330220	Lamb or mutton stew with potatoes and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27341035	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27341040	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27341045	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27341050	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27341055	Chicken or turkey, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato-based sauce*
27341060	Chicken or turkey, potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27343470	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27343480	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27343520	Chicken or turkey, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato-based sauce*
27343950	Chicken or turkey, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*

Food code	Food description
27345410	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27345420	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cream sauce, white sauce, or mushroom sauce*
27345440	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; cheese sauce*
27345450	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; cheese sauce*
27345510	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; tomato- based sauce*
27345520	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; tomato- based sauce*
27350080 27351040	Tuna noodle casserole with vegetables, cream or white sauce* Biscayne codfish, Puerto Rican style*
27360010	Goulash, NFS*
27411100	Beef with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27411200	Beef with vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27416300	Beef taco filling: beef, cheese, tomato, taco sauce*
27418310	Corned beef with tomato sauce and onion, Puerto Rican style*
27420400	Pork and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27420410	Pork and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27420460	Sausage and vegetables, excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato- based sauce*
27443110	Chicken or turkey a la king with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, cream, white, or soup-based sauce*
27443120	Chicken or turkey a la king with vegetables excluding carrorts, broccoli, and dark-green leafy; no potatoes, cream, white, or soup-based sauce*
27445125	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27445130	Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, tomato-based sauce*
27446400	Chicken or turkey and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, cheese sauce*
27450700	Fish and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, tomato-based sauce*
27450710	Fish and vegetables excluding carrots, broccoli, and dark- green leafy; no potatoes, tomato-based sauce*
27520500	Pork sandwich, on white roll, with onions, dill pickles and barbecue sauce*
27520510	Pork barbecue sandwich or Sloppy Joe, on bun*
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato*
28110380	Salisbury steak with gravy, macaroni and cheese, frozen meal*
28110620	Beef short ribs, boneless, with barbecue sauce, potatoes, vegetable, frozen meal*

Food	Food description
cod e 28140740	Chicken patty or nuggets, boneless, breaded, with pasta and tomato sauce, fruit, dessert, frozen
00111110	meal*
28141610	Chicken and vegetables in cream or white sauce, diet frozen meal*
28143020 28143080	Chicken and vegetable entree with rice, diet frozen meal* Chicken with noodles and cheese sauce, diet frozen meal*
28143080	Chicken in cream sauce with noodles and vegetable, frozen meal*
28144100	Chicken and vegetable entree with noodles and cream sauce, frozen meal*
41202500	Beans and tomatoes, NS as to fat added in cooking*
41202505	Beans and tomatoes, no added fat*
41202510	Beans and tomatoes, fat added*
41221020	Chili with beans, without meat*
41310150	Stewed chickpeas, Puerto Rican style*
41310160	Stewed chickpeas, with potatoes, Puerto Rican style*
41311030	Lentil curry*
41311040	Lentil curry with rice*
42204050	Peanut sauce
58101820	Mexican casserole made with ground beef, beans, tomato sauce, cheese, taco seasonings, and corn chips*
58101830	Mexican casserole made with ground beef, tomato sauce, cheese, taco seasonings, and corn chips*
58106200	Pizza, cheese, from frozen, thin crust*
58106205	Pizza, cheese, from frozen, thick crust*
58106210	Pizza, cheese, from restaurant or fast food, NS as to type of crust*
58106220	Pizza, cheese, from restaurant or fast food, thin crust*
58106225	Pizza, cheese, from restaurant or fast food, medium crust*
58106230	Pizza, cheese, from restaurant or fast food, thick crust*
58106233	Pizza, cheese, stuffed crust*
58106234	Pizza, cheese, from school lunch, medium crust*
58106235	Pizza, cheese, from school lunch, thin crust*
58106236	Pizza, cheese, from school lunch, thick crust*
58106250	Pizza, extra cheese, thin crust*
58106260 58106300	Pizza, extra cheese, thick crust* Pizza, cheese, with vegetables, from frozen, thin crust*
58106305	Pizza, cheese with vegetables, from frozen, thick crust*
58106320	Pizza, cheese, with vegetables, from restaurant or fast food, thin crust*
58106325	Pizza, cheese, with vegetables, from restaurant or fast food, medium crust*
58106330	Pizza, cheese, with vegetables, from restaurant or fast food, thick crust*
58106345	Pizza with cheese and extra vegetables, thin crust*
58106347	Pizza with cheese and extra vegetables, medium crust*
58106358	Pizza, cheese, with fruit, thin crust*
58106359	Pizza, cheese, with fruit, medium crust*
58106360	Pizza, cheese, with fruit, thick crust*
58106512	Pizza with pepperoni, from frozen, thin crust*
58106514 58106516	Pizza with popperoni, from frozen, medium crust*
58106516 58106540	Pizza with pepperoni, from frozen, thick crust* Pizza with pepperoni, from restaurant or fast food, NS as to type of crust*
58106540	Pizza with pepperoni, from restaurant or fast food, thin crust*
50100350	

Food	Food description
code	
58106555	Pizza with pepperoni, from restaurant or fast food, medium crust*
58106560	Pizza with pepperoni, from restaurant or fast food, thick crust*
58106565	Pizza with pepperoni, stuffed crust*
58106570	Pizza with pepperoni, from school lunch, thin crust*
58106578	Pizza, with pepperoni, from school lunch, medium crust*
58106580	Pizza with pepperoni, from school lunch, thick crust*
58106602	Pizza with meat other than pepperoni, from frozen, thin crust*
58106604	Pizza with meat other than pepperoni, from frozen, medium crust*
58106606	Pizza with meat other than pepperoni, from frozen, thick crust*
58106610	Pizza with meat other than pepperoni, from restaurant or fast food, NS as to type of crust*
58106620 58106625	Pizza with meat other than pepperoni, from restaurant or fast food, thin crust*
58106625	Pizza with meat other than pepperoni, from restaurant or fast food, medium crust*
58106633	Pizza with meat other than pepperoni, from restaurant or fast food, thick crust* Pizza, with meat other than pepperoni, stuffed crust*
58106634	Pizza, with meat other than pepperoni, from school lunch, medium crust*
58106635	Pizza, with meat other than pepperoni, from school lunch, thin crust*
58106636	Pizza, with meat other than pepperoni, from school lunch, third clust Pizza, with meat other than pepperoni, from school lunch, thick crust*
58106650	Pizza with extra meat, thin crust*
58106655	Pizza with extra meat, medium crust*
58106660	Pizza with extra meat, thick crust*
58106700	Pizza with meat and vegetables, from frozen, thin crust*
58106702	Pizza with meat and vegetables, from frozen, medium crust*
58106702	Pizza with meat and vegetables, from frozen, thick crust*
58106720	Pizza with meat and vegetables, from restaurant or fast food, thin crust*
58106725	Pizza with meat and vegetables, from restaurant or fast food, medium crust*
58106730	Pizza with meat and vegetables, from restaurant or fast food, thick crust*
58106736	Pizza with extra meat and extra vegetables, thin crust*
58106737	Pizza with extra meat and extra vegetables, thick crust*
58106738	Pizza with extra meat and extra vegetables, medium crust*
58106750	Pizza with meat and fruit, thin crust*
58106755	Pizza with meat and fruit, medium crust*
58106760	Pizza with meat and fruit, thick crust*
58106830	Pizza with beans and vegetables, thick crust*
58107050	Pizza, no cheese, thin crust*
58108050	Pizza rolls*
58109015	Pizza, cheese, whole wheat thin crust*
58109020	Pizza, cheese, whole wheat thick crust*
58109030	Pizza, with meat, whole wheat thin crust*
58109040	Pizza, with meat, whole wheat thick crust*
58109050	Pizza, cheese and vegetables, whole wheat thin crust*
58109060	Pizza, cheese and vegetables, whole wheat thick crust*
58109100	Pizza, cheese, gluten-free thin crust*
58109120	Pizza, with meat, gluten-free thin crust*
58109130	Pizza, with meat, gluten-free thick crust*
58109140	Pizza, cheese and vegetables, gluten-free thin crust*
58109150	Pizza, cheese and vegetables, gluten-free thick crust*

Food	Food description
code	
58130011	Lasagna with meat*
58130013	Lasagna with meat, canned*
58130014	Lasagna with meat, from restaurant*
58130015	Lasagna with meat, home recipe*
58130016	Lasagna with meat, frozen*
58130020	Lasagna with meat and spinach*
58130140	Lasagna with chicken or turkey*
58130150	Lasagna, with chicken or turkey, and spinach*
58130310	Lasagna, meatless*
58130320	Lasagna, meatless, with vegetables*
58131110	Ravioli, NS as to filling, with tomato sauce*
58131120	Ravioli, NS as to filling, with cream sauce*
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce*
58131323	Ravioli, meat-filled, with tomato sauce or meat sauce, canned*
58131330	Ravioli, meat-filled, with cream sauce*
58131520	Ravioli, cheese-filled, with tomato sauce*
58131523	Ravioli, cheese-filled, with tomato sauce, canned*
58131535	Ravioli, cheese-filled, with cream sauce*
58131600	Ravioli, cheese and spinach-filled, with cream sauce*
58131610	Ravioli, cheese and spinach filled, with tomato sauce*
58133120	Manicotti, cheese-filled, with tomato sauce, meatless*
58134120	Stuffed shells, cheese-filled, with tomato sauce, meatless*
58134130	Stuffed shells, cheese-filled, with meat sauce*
58134310	Stuffed shells, with fish and/or shellfish, with tomato sauce*
58134610	Tortellini, meat-filled, with tomato sauce*
58134613	Tortellini, meat-filled, with tomato sauce, canned*
58134620	Tortellini, cheese-filled, meatless, with tomato sauce*
58134660	Tortellini, cheese-filled, with cream sauce*
58134710	Tortellini, spinach-filled, with tomato sauce*
58145110	Macaroni or noodles with cheese*
58145111	Macaroni or noodles with cheese, from restaurant*
58145112	Macaroni or noodles with cheese, made from packaged mix*
58145113	Macaroni or noodles with cheese, canned*
58145117	Macaroni or noodles with cheese, Easy Mac type*
58145119	Macaroni or noodles with cheese, made from reduced fat packaged mix*
58145120	Macaroni or noodles with cheese and tuna*
58145135	Macaroni or noodles with cheese and meat*
58145136	Macaroni or noodles with cheese and meat, prepared from Hamburger Helper mix*
58145140	Macaroni or noodles with cheese and tomato*
58145160	Macaroni or noodles with cheese and frankfurters or hot dogs*
58145170	Macaroni or noodles with cheese and egg*
58145190	Macaroni or noodles with cheese and chicken or turkey*
58145300	Macaroni or noodles with cheese, whole grain*
58146120	Pasta with tomato-based sauce, cheese and meat*
58146150	Pasta with tomato-based sauce and cheese*
58146210	Pasta with sauce, NFS*

Food	Food description
code	
58146215	Pasta with sauce, meatless, school lunch*
58146221	Pasta with tomato-based sauce, restaurant*
58146222	Pasta with tomato-based sauce, home recipe*
58146223	Pasta with tomato-based sauce, ready-to-heat*
58146301	Pasta with tomato-based sauce, and added vegetables, restaurant*
58146302	Pasta with tomato-based sauce, and added vegetables, home recipe*
58146303	Pasta with tomato-based sauce, and added vegetables, ready-to-heat*
58146315	Pasta with sauce and meat, from school lunch*
58146321	Pasta with tomato-based sauce and meat, restaurant*
58146322	Pasta with tomato-based sauce and meat, home recipe*
58146323	Pasta with tomato-based sauce and meat, ready-to-heat*
58146331	Pasta with tomato-based sauce, meat, and added vegetables, restaurant*
58146332	Pasta with tomato-based sauce, meat, and added vegetables, home recipe*
58146333	Pasta with tomato-based sauce, meat, and added vegetables, ready-to-heat*
58146341	Pasta with tomato-based sauce and poultry, restaurant*
58146342	Pasta with tomato-based sauce and poultry, home recipe*
58146343	Pasta with tomato-based sauce and poultry, ready-to-heat* Pasta with tomato-based sauce, poultry, and added vegetables, restaurant*
58146351	
58146352 58146353	Pasta with tomato-based sauce, poultry, and added vegetables, home recipe*
58146361	Pasta with tomato-based sauce, poultry, and added vegetables, ready-to-heat* Pasta with tomato-based sauce and seafood, restaurant*
58146362	
58146363	Pasta with tomato-based sauce and seafood, home recipe* Pasta with tomato-based sauce and seafood, ready-to-heat*
58146303	Pasta with tomato-based sauce, seafood, and added vegetables, restaurant*
58146371	Pasta with tomato-based sauce, seafood, and added vegetables, restaurant Pasta with tomato-based sauce, seafood, and added vegetables, home recipe*
58146372	Pasta with tomato-based sauce, seafood, and added vegetables, nome recipe Pasta with tomato-based sauce, seafood, and added vegetables, ready-to-heat*
58146381	Pasta with cream sauce, restaurant*
58146382	Pasta with cream sauce, home recipe*
58146383	Pasta with cream sauce, ready-to-heat*
58146391	Pasta with cream sauce and added vegetables, restaurant*
58146392	Pasta with cream sauce and added vegetables, from home recipe*
58146393	Pasta with cream sauce and added vegetables, ready-to-heat*
58146401	Pasta with cream sauce and meat, restaurant*
58146402	Pasta with cream sauce and meat, home recipe*
58146403	Pasta with cream sauce and meat, ready-to-heat*
58146411	Pasta with cream sauce, meat, and added vegetables, restaurant*
58146412	Pasta with cream sauce, meat, and added vegetables, home recipe*
58146413	Pasta with cream sauce, meat, and added vegetables, ready-to-heat*
58146421	Pasta with cream sauce and poultry, restaurant*
58146422	Pasta with cream sauce and poultry, home recipe*
58146423	Pasta with cream sauce and poultry, ready-to-heat*
58146431	Pasta with cream sauce, poultry, and added vegetables, restaurant*
58146432	Pasta with cream sauce, poultry, and added vegetables, home recipe*
58146433	Pasta with cream sauce, poultry, and added vegetables, ready-to-heat*
58146441	Pasta with cream sauce and seafood, restaurant*
58146442	Pasta with cream sauce and seafood, home recipe*

Food	Food description
code	
58146443	Pasta with cream sauce and seafood, ready-to-heat*
58146451	Pasta with cream sauce, seafood, and added vegetables, restaurant*
58146452	Pasta with cream sauce, seafood, and added vegetables, home recipe*
58146601	Pasta, whole grain, with tomato-based sauce, restaurant*
58146602	Pasta, whole grain, with tomato-based sauce, home recipe*
58146603	Pasta, whole grain, with tomato-based sauce, ready-to-heat*
58146612	Pasta, whole grain, with tomato-based sauce and added vegetables, home recipe*
58146613	Pasta, whole grain, with tomato-based sauce and added vegetables, ready-to-heat*
58146622	Pasta, whole grain, with tomato-based sauce and meat, home recipe*
58146623	Pasta, whole grain, with tomato-based sauce and meat, ready-to-heat*
58146632	Pasta, whole grain, with tomato-based sauce, meat, and added vegetables, home recipe*
58146641	Pasta, whole grain, with tomato-based sauce and poultry, restaurant*
58146642	Pasta, whole grain, with tomato-based sauce and poultry, home recipe*
58146652	Pasta, whole grain, with tomato-based sauce, poultry, and added vegetables, home recipe*
58146653	Pasta, whole grain, with tomato-based sauce, poultry, and added vegetables, ready-to-heat*
58146662	Pasta, whole grain, with tomato-based sauce and seafood, home recipe*
58146672	Pasta, whole grain, with tomato-based sauce, seafood, and added vegetables, home recipe*
58146682	Pasta, whole grain, with cream sauce, home recipe*
58146683	Pasta, whole grain, with cream sauce, ready-to-heat*
58146692	Pasta, whole grain, with cream sauce, and added vegetables, home recipe*
58146693	Pasta, whole grain, with cream sauce, and added vegetables, ready-to-heat*
58146702	Pasta, whole grain, with cream sauce and meat, home recipe*
58146713	Pasta, whole grain, with cream sauce, meat, and added vegetables, ready-to-heat*
58146722	Pasta, whole grain, with cream sauce and poultry, home recipe*
58146723	Pasta, whole grain, with cream sauce and poultry, ready-to-heat*
58146732	Pasta, whole grain, with cream sauce, poultry, and added vegetables, home recipe*
58146733	Pasta, whole grain, with cream sauce, poultry, and added vegetables, ready-to-heat*
58146741	Pasta, whole grain, with cream sauce and seafood, restaurant*
58147330	Macaroni or noodles, creamed, with cheese*
58147340	Macaroni or noodles, creamed, with cheese and tuna*
58160120	Beans and rice, with tomatoes*
58162110	Stuffed pepper, with rice and meat*
58164500	Rice, white, with cheese and/or cream based sauce, NS as to fat*
58164510	Rice, white, with cheese and/or cream based sauce, no added fat*
58164520	Rice, white, with cheese and/or cream based sauce, fat added*
58164800	Rice, brown, with cheese and/or cream based sauce, NS as to fat*
58164820	Rice, brown, with cheese and/or cream based sauce, fat added*
58165000	Rice, white, with vegetables, cheese and/or cream based sauce, NS as to fat*
58165010	Rice, white, with vegetables, cheese and/or cream based sauce, no added fat*
58165020	Rice, white, with vegetables, cheese and/or cream based sauce, fat added*
58165400	Rice, brown, with vegetables, cheese and/or cream based sauce, NS as to fat*
58165420	Rice, brown, with vegetables, cheese and/or cream based sauce, fat added*
58301050	Lasagna with cheese and meat sauce, diet frozen meal*
58301110	Vegetable lasagna, frozen meal*
58302000	Macaroni and cheese, diet frozen meal*
58302080	Noodles with vegetables in tomato-based sauce, diet frozen meal*

Food	Food description
code	
58303100	Rice, with broccoli, cheese sauce, frozen side dish*
58304010	Spaghetti and meatballs dinner, NFS, frozen meal*
58304060	Spaghetti with meat sauce, diet frozen meal*
58304200	Ravioli, cheese-filled, with tomato sauce, diet frozen meal*
58305250	Pasta with vegetable and cheese sauce, diet frozen meal*
58306070	Cheese enchilada, frozen meal* Spinach, creamed*
72125230 72125231	Spinach, from fresh, creamed*
72125231	Spinach, from frozen, creamed*
72125252	Spinach, cooked, NS as to form, with cheese sauce*
72125250	Spinach, cooked, from canned, with cheese sauce*
72125255	Spinach and cheese casserole*
72201230	Broccoli, cooked, NS as to form, with cheese sauce*
72201230	Broccoli, cooked, from fresh, with cheese sauce*
72201231	Broccoli, cooked, from frozen, with cheese sauce*
72201250	Broccoli, cooked, NS as to form, with cream sauce*
72201252	Broccoli, cooked, from frozen, with cream sauce*
73102230	Carrots, cooked, NS as to form, creamed*
73102231	Carrots, cooked, from fresh, creamed*
74404010	Spaghetti sauce
74404020	Spaghetti sauce with added vegetables
74404090	Vodka sauce with tomatoes and cream
74406010	Barbecue sauce
74406500	Cocktail sauce
75216153	Corn, creamed*
75302009	Beans, string, green, with tomatoes, cooked, NS as to fat added in cooking*
75302011	Beans, string, green, with tomatoes, cooked, fat added in cooking*
75306010	Eggplant in tomato sauce, cooked, fat not added in cooking*
75316030	Squash, summer, yellow or green, with tomato sauce, cooked, fat not added in cooking*
75316031	Squash, summer, yellow or green, with tomato sauce, cooked, fat added in cooking*
75316032	Squash, summer, yellow or green, with tomato sauce, cooked, NS as to fat added in cooking*
75340160	Vegetable and pasta combinations with cream or cheese sauce, broccoli, pasta, carrots, corn,
75 404040	zucchini, peppers, cauliflower, peas, etc., cooked*
75401010	Asparagus, NS as to form, creamed or with cheese sauce*
75401011	Asparagus, from fresh, creamed or with cheese sauce*
75403010	Beans, string, green, NS as to form, creamed or with cheese sauce*
75403011	Beans, string, green, from fresh, creamed or with cheese sauce*
75403012	Beans, string, green, from frozen, creamed or with cheese sauce*
75403013	Beans, string, green, from canned, creamed or with cheese sauce*
75409010	Cauliflower, NS as to form, creamed*
75409011 75410500	Cauliflower, from fresh, creamed* Chiles rellenos, cheese-filled*
75410500	Corn, cooked, from frozen, with cream sauce, made with milk*
75411032	Eggplant parmesan casserole, regular*
75412000	Eggplant with cheese and tomato sauce*
75412070	Mushrooms, NS as to form, creamed*
70111010	

Food	Food description
code	
75414011	Mushrooms, from fresh, creamed*
75414013	Mushrooms, from canned, creamed*
75415010	Onions, NS as to form, creamed*
75417010	Peas, NS as to form, creamed*
75417012	Peas, from frozen, creamed*
75417032	Peas, cooked, from frozen, with tomato sauce*
75418030	Squash, summer, casserole, with rice and tomato sauce*
75418040	Squash, summer, casserole, with cheese sauce*
75440300	Vegetable combinations, including carrots, broccoli, and/or dark-green leafy; cooked, with tomato sauce*
75440310	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with tomato sauce*
75440500	Vegetable combinations, including carrots, broccoli, and/or dark-green leafy; cooked, with cheese sauce*
75440510	Vegetable combinations, excluding carrots, broccoli, and dark-green leafy; cooked, with cheese sauce*
75440600	Vegetable curry*
75440610	Vegetable curry with rice*
75450500	Vegetable combination, including carrots, broccoli, and/or dark-green leafy; cooked, with cream
	sauce*
75450510	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, with cream sauce*
77205110	Ripe plantain fritters, Puerto Rican style*
77250110	Stuffed tannier fritters, Puerto Rican style*
77316010	Stuffed cabbage, with meat, Puerto Rican style*
77316510	Stuffed cabbage, with meat and rice, Syrian dish, Puerto Rican style*
81301000	Garlic sauce
81301020	Lemon-butter sauce
81302010	Hollandaise sauce
81302050	Tartar sauce
81302070	Pesto sauce
81312100	Curry sauce
89901010	Cream sauce, for use with vegetables
89901020	Cheese sauce, for use with vegetables
89901050	Tomato sauce, for use with vegetables
91361010	Sweet and sour sauce
	and grain drinks
11551050	Licuado or Batido
11553100	Fruit smoothie, NFS
11553110	Fruit smoothie, with whole fruit and dairy
11553120	Fruit smoothie, with whole fruit and dairy, added protein
11553130	Fruit smoothie juice drink, with dairy
64134015	Fruit smoothie, with whole fruit, no dairy
64134020	Fruit smoothie, with whole fruit, no dairy, added protein
64134025	Fruit smoothie, with whole fruit, non-dairy
64134030	Fruit smoothie juice drink, no dairy
64134100	Fruit smoothie, light

Food code	Food description
64134200	Fruit smoothie, bottled
78101100	Fruit and vegetable smoothie, with dairy
78101110	Fruit and vegetable smoothie, added protein
78101115	Fruit and vegetable smoothie, non-dairy
78101118	Fruit and vegetable smoothie, non-dairy, added protein
78101120	Fruit and vegetable smoothie, bottled
78101125	Fruit and vegetable smoothie, no dairy
78101130	Vegetable smoothie
92306100	Corn beverage
92610020	Horchata beverage, made with water
92610030	Horchata beverage, made with milk
92611010	Oatmeal beverage with water
92611100 92613010	Oatmeal beverage with milk Cornmeal beverage
92613010	Commeal beverage with chocolate milk
Snack food	8
41310900	Bean chips
51184000	Breadsticks, hard, NFS
51184100	Breadsticks, hard, reduced sodium
51187000	Melba toast
51188500	Zwieback toast
51306000	Breadsticks, hard, whole wheat
51808050	Breadsticks, hard, gluten free
54001000	Crackers, NFS
54102050	Crackers, oatmeal
54103000	Crackers, breakfast biscuit
54200100	Crackers, butter, reduced sodium
54201010	Crackers, matzo, reduced sodium
54202020	Crackers, saltine, reduced sodium
54204020	Crackers, wheat, reduced sodium
54204030	Crackers, woven wheat, reduced sodium
54301010 54301020	Crackers, butter, plain Crackers, butter, flavored
54301020	Crackers, butter (Ritz)
54301030	Crackers, butter, reduced fat
54304000	Crackers, cheese
54304005	Crackers, cheese (Cheez-It)
54304020	Crackers, cheese (Goldfish)
54304100	Crackers, cheese, reduced fat
54304110	Crackers, cheese, reduced sodium
54304150	Crackers, cheese, whole grain
54305010	Crackers, crispbread
54305020	Crackers, flatbread
54307000	Crackers, matzo
54308000	Crackers, milk
54313000	Crackers, oyster

Food	Food description
code 54318000	Chine rico
54318000	Chips, rice Rice cake
54318500	Crackers, rice
54319000	Crackers, rice and nuts
54319005	Popcorn cake
54319020	Rice paper
54319500	Crackers, saltine
54325000	Crackers, saltine, reduced fat
54325010	Crackers, saltine, nultigrain
54326000	Crackers, saline, multigrain Crackers, multigrain
54328000	Crackers, sandwich
54328000	
54328100	Crackers, sandwich, peanut butter filled
54328105	Crackers, sandwich, peanut butter filled (Ritz)
54328110	Crackers, sandwich, reduced fat, peanut butter filled
	Crackers, whole grain, sandwich, peanut butter filled Crackers, sandwich, cheese filled
54328200 54328210	
54326210	Crackers, sandwich, cheese filled (Ritz) Crackers, water
54336100	Crackers, water Crackers, wonton
54337010	Crackers, working theat
54337010	Crackers, woven wheat, plain (Triscuit)
54337020	Crackers, woven wheat, flavored (Triscuit)
54337030	Crackers, woven wheat, reduced (Triscuit)
54337000	Crackers, wheat
54338000	Crackers, wheat, plain (Wheat Thins)
54338020	Crackers, wheat, flavored (Wheat Thins)
54338020	Crackers, wheat, reduced fat
54339000	Crackers, wheat, reduced fat
54339000	Crackers, gluten free, plain
54340100	Crackers, gluten free, flavored
54401011	Corn nuts
54401011	Corn chips, plain
54401021	Corn chips, flavored
54401020	Corn chips, plain (Fritos)
54401031	Corn chips, flavored (Fritos)
54401035	Cheese flavored corn snacks
54401055	Cheese flavored corn snacks, reduced fat
54401005	Tortilla chips, plain
54401075	Cheese flavored corn snacks (Cheetos)
54401081	Tortilla chips, flavored
54401085	Corn chips, reduced sodium
54401090	Tortilla chips, nacho cheese flavor (Doritos)
54401110	Tortilla chips, cool ranch flavor (Doritos)
54401111	Tortilla chips, other flavors (Doritos)
54401112	Tortilla chips, reduced fat, plain
54401121	Tortilla chips, reduced fat, flavored
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Food	Food description
code	
54401170	Tortilla chips, low fat, unsalted
54402080	Tortilla chips, reduced sodium
54402200	Snack mix
54402700	Pita chips
54403001	Popcorn, NFS
54403005	Popcorn, movie theater, with added butter
54403006	Popcorn, movie theater, unbuttered
54403010	Popcorn, air-popped, unbuttered
54403040	Popcorn, air-popped, with added butter or margarine
54403045	Popcorn, popped in oil, unbuttered
54403046	Popcorn, popped in oil, with added butter or margarine
54403051	Popcorn, microwave, NFS
54403052 54403053	Popcorn, microwave, plain
54403053 54403054	Popcorn, microwave, plain, light Popcorn, microwave, low sodium
54403054	Popcorn, microwave, iow souldin Popcorn, microwave, unsalted
54403055	Popcorn, microwave, butter flavored
54403057	Popcorn, microwave, butter flavored, light
54403058	Popcorn, microwave, cheese flavored
54403059	Popcorn, microwave, kettle corn
54403061	Popcorn, microwave, kettle corn, light
54403062	Popcorn, microwave, other flavored
54403080	Popcorn, ready-to-eat packaged, NFS
54403081	Popcorn, ready-to-eat packaged, plain
54403082	Popcorn, ready-to-eat packaged, plain, light
54403034	Popcorn, ready-to-eat packaged, low sodium
54403085	Popcorn, ready-to-eat packaged, butter flavored
54403086	Popcorn, ready-to-eat packaged, butter flavored, light
54403087	Popcorn, ready-to-eat packaged, cheese flavored
54403088	Popcorn, ready-to-eat packaged, cheese flavored, light
54403089	Popcorn, ready-to-eat-packaged, kettle corn
54403091	Popcorn, ready-to-eat packaged, kettle corn, light
54403092	Popcorn, ready-to-eat packaged, other flavored
54403110	Popcorn, caramel coated
54403120	Popcorn, caramel coated, with nuts
54403160	Popcorn, chocolate coated
54404000	Popcorn chips, plain
54404010	Popcorn chips, other flavors
54404020	Popcorn chips, sweet flavors
54406010	Onion flavored rings
54406200	Shrimp chips
54408000	Pretzels, NFS
54408015	Pretzels, hard, NFS
54408016	Pretzels, hard, plain, salted
54408017	Pretzels, hard, plain, lightly salted
54408030	Pretzels, hard, plain, unsalted

Food	Food description
code	
54408035	Pretzels, hard, flavored
54408070	Pretzels, hard, multigrain
54408081	Pretzels, hard, plain, gluten free
54408082	Pretzels, hard, flavored, gluten free
54408105	Pretzel chips, hard, plain
54408110	Pretzel chips, hard, flavored
54408190	Pretzels, hard, coated, NFS
54408200	Pretzels, hard, chocolate coated
54408210	Pretzels, hard, white chocolate coated
54408250	Pretzels, hard, yogurt coated
54408290	Pretzels, hard, filled, NFS
54408300	Pretzels, hard, cheese filled
54408310	Pretzels, hard, peanut butter filled
54420210	Multigrain chips (Sun Chips)
54420220	Snack mix, plain (Chex Mix)
54440010	Bagel chips
54440020	Cracker chips
56116000	Noodles, chow mein
58101820	Mexican casserole made with ground beef, beans, tomato sauce, cheese, taco seasonings, and
58101830	corn chips*
	Mexican casserole made with ground beef, tomato sauce, cheese, taco seasonings, and corn chips* Nachos with cheese and sour cream*
58104090 58104120	Nachos with cheese*
58104130	Nachos with meat and cheese* Nachos with chicken and cheese*
58104150 58104160	Nachos with chili*
58104180	Nachos with meat, cheese, and sour cream*
58104180	Nachos with chicken, cheese, and sour cream*
71200010	Potato chips, NFS
71200010	Potato chips, plain
71200100	Potato chips, barbecue flavored
71200110	Potato chips, sour cream and onion flavored
71200120	Potato chips, cheese flavored
71200130	Potato chips, other flavored
71200200	Potato chips, ruffled, plain
71200200	Potato chips, ruffled, barbecue flavored
71200210	Potato chips, ruffled, sour cream and onion flavored
71200220	Potato chips, ruffled, cheese flavored
71200240	Potato chips, ruffled, other flavored
71200300	Potato chips, restructured, plain
71200300	Potato chips, restructured, flavored
71200310	Potato chips, baked, plain
71200400	Potato chips, baked, flavored
71200110	Potato chips, reduced fat
71201060	Potato chips, fat free
71201200	Potato chips, restructured, reduced fat, lightly salted

Food code	Food description
71201210	Potato chips, restructured, fat free
71202000	Potato chips, unsalted
71202100	Potato chips, reduced fat, unsalted
71202500	Potato chips, lightly salted
71202510	Potato chips, restructured, lightly salted
71203010	Potato chips, popped, plain
71203020	Potato chips, popped, flavored
71205020	Potato sticks, plain
71205030	Potato sticks, flavored
71205040	Potato sticks, fry shaped
71220000	Vegetable chips
71905410	Plantain chips
71980200	Taro chips
73410210	Sweet potato chips
Soups	
14710100	Cheddar cheese soup, home recipe, canned or ready-to-serve
27113100	Beef stroganoff*
27113300	Swedish meatballs with cream or white sauce*
27114000	Beef with mushroom sauce*
27115000	Beef with soy-based sauce*
27120080	Ham stroganoff*
27120090	Ham or pork with mushroom sauce*
27120150	Pork or ham with soy-based sauce*
27141000	Chicken or turkey cacciatore*
27144000 27150160	Chicken or turkey with mushroom sauce* Shrimp with lobster sauce*
27160100	Meatballs, NS as to type of meat, with sauce*
27212350	Beef stroganoff with noodles*
27212330	Beef and noodles with mushroom sauce*
27212400	Porcupine balls with tomato-based sauce*
27213120	Beef and rice with mushroom sauce*
27213500	Beef and rice with soy-based sauce*
27241010	Chicken or turkey and potatoes with gravy*
27242500	Chicken or turkey and noodles with soy-based sauce*
27243300	Chicken or turkey and rice with cream sauce*
27243600	Chicken or turkey and rice with soy-based sauce*
27250630	Tuna noodle casserole with mushroom sauce*
27311645	Beef, potatoes, and vegetables including carrots, broccoli, and/or dark-green leafy; soy-based
	sauce*
27313150	Beef, noodles, and vegetables including carrots, broccoli, and/or dark-green leafy; soy-based sauce*
27313160	Beef, noodles, and vegetables excluding carrots, broccoli, and dark-green leafy; soy-based sauce*
27315510	Beef, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; soy-based sauce*
27315520	Beef, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; soy-based sauce*
27317010	Beef pot pie*
27320320	Pork, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; soy-based sauce*
27320330	Pork, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; soy-based sauce*

Food code	Food description
27345310	Chicken or turkey, rice, and vegetables including carrots, broccoli, and/or dark-green leafy; soy- based sauce*
27345320	Chicken or turkey, rice, and vegetables excluding carrots, broccoli, and dark-green leafy; soy-based sauce*
27360090	Paella, NFS*
27363000	Gumbo with rice*
27414100	Beef with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, mushroom sauce*
27415100	Beef and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, soy-based sauce*
27415120	Beef, tofu, and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, soy- based sauce*
27415170	Kung Pao beef*
27415200	Beef and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, soy-based sauce*
27416150	Pepper steak*
27416400	Stir fried beef and vegetables in soy sauce*
27420170	Pork and onions with soy-based sauce*
27420370	Pork, tofu, and vegetables, excluding carrots, broccoli, and dark-green leafy; no potatoes, soy-based sauce*
27420500	Pork and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, soy-based sauce*
27420510	Pork and vegetables excluding carrots, broccoli, and dark- green leafy; no potatoes, soy-based sauce*
27443150	Chicken or turkey divan*
27445120	Chicken or turkey and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, soy-based sauce*
27445250	Almond chicken*
27450660	Shellfish mixture and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, mushroom sauce*
27464000	Gumbo, no rice*
28110250	Sirloin tips, with gravy, potatoes, vegetable, frozen meal*
28110330	Salisbury steak with gravy, whipped potatoes, vegetable, dessert, frozen meal*
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert, frozen meal*
28110380	Salisbury steak with gravy, macaroni and cheese, frozen meal*
28110390	Salisbury steak, potatoes, vegetable, dessert, diet frozen meal*
28110510 28113140	Beef, sliced, with gravy, potatoes, vegetable, frozen meal*
28113140	Beef with spaetzle or rice, vegetable, frozen meal* Chicken dinner, NFS, frozen meal*
28140100	Chicken and noodles with vegetable, dessert, frozen meal*
28140520	Chicken and vegetables in cream or white sauce, diet frozen meal*
28141010	Chicken in cream sauce with noodles and vegetable, frozen meal*
28143170	Chicken in butter sauce with potatoes and vegetable, diet frozen meal*
28143190	Chicken in mushroom sauce, white and wild rice, vegetable, frozen meal*
28145100	Turkey with gravy, dressing, vegetable and fruit, diet frozen meal*
28154010	Shrimp and vegetables in sauce with noodles, diet frozen meal*

Food	Food description
code	
28310110	Beef, broth, bouillon, or consomme
28310150	Oxtail soup
28310320	Beef noodle soup, Puerto Rican style
28310330	Pho
28311010	Pepperpot soup
28311030	Menudo soup, canned, prepared with water or ready-to-serve
28315050	Beef vegetable soup with potato, pasta, or rice, chunky style, canned, or ready-to-serve
28315160	Italian Wedding Soup
28317010	Beef stroganoff soup, chunky style, home recipe, canned or ready-to-serve
28320130	Ham, rice, and potato soup, Puerto Rican style
28320140	Ham, noodle, and vegetable soup, Puerto Rican style
28320160	Pork vegetable soup with potato, pasta, or rice, stew type, chunky style
28320300	Pork with vegetable excluding carrots, broccoli and/or dark-green leafy; soup, Asian Style
28321130	Bacon soup, cream of, prepared with water
28340110	Chicken or turkey broth, bouillon, or consomme
28340150 28340179	Mexican style chicken broth soup stock Beef broth, less or reduced sodium, canned or ready-to-serve
28340179	Chicken or turkey broth, less or reduced sodium, canned or ready-to-serve
28340180	Chicken rice soup, Puerto Rican style
28340210	Chicken soup with noodles and potatoes, Puerto Rican style
28340310	Chicken or turkey gumbo soup, home recipe, canned or ready-to-serve
28340510	Chicken or turkey gunbo soup, chunky style, canned or ready-to-serve
28340550	Sweet and sour soup
28340580	Chicken or turkey soup with vegetables, broccoli, carrots, celery, potatoes and onions, Asian style
28340600	Chicken or turkey vegetable soup, canned, prepared with water or ready-to-serve
28340630	Chicken or turkey vegetable soup with rice, stew type, chunky style
28340640	Chicken or turkey vegetable soup with noodles, stew type, chunky style, canned or ready-to-serve
28340690	Chicken or turkey vegetable soup with potato and cheese, chunky style, canned or ready-to-serve
28340700	Bird's nest soup
28340750	Hot and sour soup
28340800	Chicken or turkey soup with vegetables and fruit, Asian Style
28345110	Chicken or turkey soup, cream of, NS as to prepared with milk or water
28345120	Chicken or turkey soup, cream of, prepared with milk
28345130	Chicken or turkey soup, cream of, prepared with water
28345160	Chicken or turkey mushroom soup, cream of, prepared with milk
28345170	Duck soup
28350050	Fish chowder
28350120	Crab soup, tomato-base
28350210	Clam chowder, NS as to Manhattan or New England style
28350220	Clam chowder, Manhattan
28351110	Fish and vegetable soup, no potatoes, Mexican style
28355110	Clam chowder, New England, NS as to prepared with water or milk
28355120	Clam chowder, New England, prepared with milk
28355140	Clam chowder, New England, reduced sodium, canned or ready-to-serve
28355210	Crab soup, cream of, prepared with milk
28355250	Lobster bisque

Food	Food description
cod e 28355310	Oustar stow
28355350	Oyster stew
	Salmon soup, cream style
28355410	Shrimp soup, cream of, NS as to prepared with milk or water
28355420	Shrimp soup, cream of, prepared with milk
28355430	Shrimp soup, cream of, prepared with water
28355450	Seafood soup with potatoes and vegetables including carrots, broccoli, and/or dark-green leafy
28355460 28355470	Seafood soup with potatoes, and vegetables excluding carrots, broccoli, and dark-green leafy Seafood soup with vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes
28355480	Seafood soup with vegetables including carrots, broccoli, and dark-green leafy; no potatoes
32300100	Egg drop soup
32301100	Garlic egg soup, Puerto Rican style
41601010	Bean soup, NFS
41601020	Bean with bacon or ham soup, canned or ready-to-serve
41601030	Black bean soup, home recipe, canned or ready-to-serve
41601040	Lima bean soup, home recipe, canned or ready-to-serve
41601070	Soybean soup, miso broth
41601080	Pinto bean soup, home recipe, canned or ready-to-serve
41601090	Bean soup, with macaroni, home recipe, canned, or ready-to-serve
41601130	Bean soup, mixed beans, home recipe, canned or ready-to-serve
41601200	Liquid from stewed kidney beans, Puerto Rican style
41602010	Pea and ham soup, chunky style, canned or ready-to-serve
41602020	Garbanzo bean or chickpea soup, home recipe, canned or ready-to-serve
41602030	Split pea and ham soup
41602050	Split pea soup
41602070	Split pea soup, canned, reduced sodium, prepared with water or ready-to-serve
41603010	Lentil soup, home recipe, canned, or ready-to-serve
41812500	Tofu and vegetables including carrots, broccoli, and/or dark-green leafy; no potatoes, with soy-based
11010510	sauce*
41812510	Tofu and vegetables excluding carrots, broccoli, and dark-green leafy; no potatoes, with soy-based
44040050	sauce*
41812850	Vegetarian stroganoff*
58103120	Tamale with meat*
58103130 58127150	Tamale with chicken*
	Vegetables and cheese in pastry* Dirty rice*
58163130 58163410	Spanish rice, fat added*
58163410	Spanish rice, no added fat*
58163420	Spanish rice, NS as to fat*
58163450	Spanish rice with ground beef*
58163510	Rice dressing*
58164560	Rice, white, with soy-based sauce, NS as to fat*
58164570	Rice, white, with soy-based sauce, no added fat*
58164580	Rice, white, with soy-based sauce, fat added*
58165060	Rice, white, with vegetables, soy-based sauce, NS as to fat*
58165070	Rice, white, with vegetables, soy-based sauce, no added fat*
58165080	Rice, white, with vegetables, soy-based sauce, fat added*

Food	Food description
code	
58165460	Rice, brown, with vegetables, soy-based sauce, NS as to fat*
58165470	Rice, brown, with vegetables, soy-based sauce, no added fat*
58165480	Rice, brown, with vegetables, soy-based sauce, fat added*
58400000	Soup, NFS
58400100	Noodle soup, NFS
58400200	Rice soup, NFS
58401010	Barley soup, home recipe, canned, or ready-to-serve
58401200	Barley soup, sweet, with or without nuts, Asian Style
58402010	Beef noodle soup, canned or ready-to-serve
58402020	Beef dumpling soup, home recipe, canned or ready-to-serve
58402030	Beef rice soup, home recipe, canned or ready-to-serve
58403010	Chicken or turkey noodle soup, canned or ready-to-serve
58403050	Chicken or turkey noodle soup, cream of, home recipe, canned, or ready-to-serve
58403060	Chicken or turkey noodle soup, reduced sodium, canned or ready-to-serve
58403100	Noodle and potato soup, Puerto Rican style
58404010	Chicken or turkey rice soup, canned, or ready-to-serve
58404040 58404100	Chicken or turkey rice soup, reduced sodium, canned, prepared with water or ready-to-serve
58404100	Rice and potato soup, Puerto Rican style
58404500	Matzo ball soup Chicken or turkey soup with dumplings and potatoes, home recipe, canned, or ready-to-serve
58404510	Chicken or turkey soup with dumplings, home recipe, canned or ready-to-serve
58404520 58407010	Instant soup, noodle
58407010	Soup, mostly noodles
58407030	Soup, mostly noodles, reduced sodium
58407035	Wonton soup
58408010	Noodle soup with vegetables, Asian style
58408500	Noodle soup, with fish ball, shrimp, and dark green leafy vegetable
63415100	Soup, fruit
71801000	Potato soup, NS as to made with milk or water
71801000	Potato soup, resam of, prepared with milk
71801010	Potato soup, prepared with water
71801020	Potato and cheese soup
71803010	Potato chowder
72202020	Broccoli casserole with rice*
72302020	Broccoli soup, prepared with milk, home recipe, canned or ready-to-serve
72302000	Broccoli soup, prepared with water, home recipe, canned, or ready-to-serve
72302020	Broccoli cheese soup, prepared with milk, home recipe, canned, or ready to serve
72307000	Spinach soup
72308000	Dark-green leafy vegetable soup with meat, Asian style
72308500	Dark-green leafy vegetable soup, meatless, Asian style
73501000	Carrot soup, cream of, prepared with milk, home recipe, canned or ready-to-serve
73502000	Squash, winter type, soup, home recipe, canned, or ready-to-serve
74601000	Tomato soup, NFS
74601010	Tomato soup, cream of, prepared with milk
74602010	Tomato soup, prepared with water, or ready-to-serve
74602200	Tomato soup, canned, reduced sodium, prepared with water, or ready-to-serve

Food	Food description
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74602300	Tomato soup, canned, reduced sodium, prepared with milk
74603010	Tomato beef soup, prepared with water
74604010	Tomato beef noodle soup, prepared with water
74604100	Tomato beef rice soup, prepared with water
74604500	Tomato noodle soup, canned, prepared with water or ready-to-serve
74604600	Tomato noodle soup, canned, prepared with milk
74605010	Tomato rice soup, prepared with water
74606010	Tomato vegetable soup, prepared with water
74606020	Tomato vegetable soup with noodles, prepared with water
75403020	Green bean casserole*
75403022	Beans, string, green, cooked, from frozen, with mushroom sauce*
75417022	Peas, cooked, from frozen, with mushroom sauce*
75440100	Vegetable combination, including carrots, broccoli, and/or dark-green leafy; cooked, with soy-based sauce*
75440110	Vegetable combination, excluding carrots, broccoli, and dark-green leafy; cooked, with soy-based sauce*
75600150	Soup, cream of, NFS
75601000	Asparagus soup, cream of, NS as to made with milk or water
75601010	Asparagus soup, cream of, prepared with milk
75601100	Borscht
75601200	Cabbage soup, home recipe, canned or ready-to-serve
75601210	Cabbage with meat soup, home recipe, canned or ready-to-serve
75603010	Celery soup, cream of, prepared with milk, home recipe, canned or ready-to-serve
75604010	Corn soup, cream of, prepared with milk
75604020	Corn soup, cream of, prepared with water
75604600	Gazpacho
75605010	Leek soup, cream of, prepared with milk
75607000	Mushroom soup, NFS
75607010	Mushroom soup, cream of, prepared with milk
75607020	Mushroom soup, cream of, prepared with water
75607040	Mushroom soup, with meat broth, prepared with water
75607060	Mushroom soup, cream of, NS as to made with milk or water
75607090	Mushroom soup, cream of, canned, reduced sodium, NS as to made with milk or water
75607100	Mushroom soup, cream of, canned, reduced sodium, prepared with milk
75607140	Mushroom soup, cream of, canned, reduced sodium, prepared with water
75608100	Onion soup, French
75608200	Onion soup, made from dry mix
75611010	Vegetable soup, cream of, prepared with milk
75612010	Zucchini soup, cream of, prepared with milk
75646010	Shav soup
75647000	Seaweed soup
75649010	Vegetable soup, canned, prepared with water or ready-to-serve
75649040	Vegetable soup, reduced sodium, canned, ready to serve
75650990	Minestrone soup, reduced sodium, canned or ready-to-serve
75651010	Minestrone soup, canned, prepared with water, or ready-to-serve
75651020	Vegetable beef soup, canned, prepared with water, or ready-to-serve

Total Yegetable beef noodle soup, prepared with water Total Yegetable noodle soup, canned, prepared with water or ready-to-serve Total Yegetable beef soup, with rice, canned, prepared with water or ready-to-serve Total Yegetable beef soup, with rice, canned, prepared with water or ready-to-serve Total Yegetable beef soup, chunck prepared with water or ready-to-serve Total Yegetable beef soup, canned, prepared with water or ready-to-serve Total Yegetable beef soup, chunck ystyle Total Yegetable beef soup, chunky style Total Yegetable beef soup, chunky style Total Yegetable beef soup, chunk ystyle Total Yegetable beef soup, chunky style Total Yegetable beef soup, chunk ystyle Total Yegetable broth, bouillon Yegurt Yegetable broth, bouillon Yogurt Yegurt, Greek, NS as to type of milk or flavor 11410000 Yogurt, Iss as to type of milk, plain 11411010 Yogurt, Greek, NS as to type of milk, plain 11411101 Yogurt, Greek, NS as to type of milk, plain 11411102 Yogurt, Greek, nofat milk, plain 11411410	Food code	Food description
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75651070 Vegetable beef soup, canned, prepared with water or ready-to-serve 75651100 Vegetable beef soup, canned, prepared with water or ready-to-serve 75651115 Vegetable beef soup, canned, prepared with water or ready-to-serve 75652030 Vegetable beef soup, canned, prepared with water or ready-to-serve 75656040 Vegetable soup, with pasta, chunky style 75656040 Vegetable beef soup, of milk or flavor 11400000 Yogurt, NFS 114000001 Yogurt, Sa s to type of milk or flavor 11411001 Yogurt, NS as to type of milk or flavor 11411010 Yogurt, onfat milk, plain 11411100 Yogurt, Greek, NS as to type of milk, plain 11411101 Yogurt, Greek, whole milk, plain 11411101 Yogurt, Greek, wola milk, plain 11411101 Yogurt, Greek, wola milk, plain 11411102 Yogurt, Greek, wola milk, plain 11411102 Yogurt, Greek, wola milk, fruit 11433000 Yogurt, Greek, Nortat mi		
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	27116110	Beef curry with rice*
27130100 Lamb or mutton curry*		
	27130100	Lamb or mutton curry*

Food	Food description
code	
27146150	Chicken curry*
27146155	Chicken curry with rice*
27150100	Shrimp curry*
27150320	Fish curry*
27150325	Fish curry with rice*
27213010	Biryani with meat*
27243100	Biryani with chicken*
27516010	Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread*
32101530	Egg curry*
41311030	Lentil curry*
41311040	Lentil curry with rice*
75440600	Vegetable curry*
75440610	Vegetable curry with rice*
77316600	Eggplant and meat casserole*

* Only the proportion of the food (as a percentage of total weight) corresponding to the proposed use of SFC was identified and only this portion of the food weight was included in the analysis.

** Not reconstituted powders and concentrates were adjusted to the amount of prepared/reconstituted product.

EXHIBIT III.

GRAS Panel Report

Generally Recognized As Safe (GRAS) Panel Report on the GRAS Conclusion for Corn Bran Arabinoxylan

March 08, 2021

Introduction

AgriFiber Solutions, LLC intends to use corn bran arabinoxylan (i.e. BFG) as a source of dietary fiber, as a formulation aid (e.g., binder and gelling agent), as a texturizer, and as a stabilizer and thickener (e.g., emulsifier) within select foods and beverages. A panel of independent experts (the "GRAS Panel"), qualified by their scientific training and relevant national and international experience to evaluate the safety of food ingredients, was convened to conduct an independent, critical and comprehensive evaluation of the available technical and safety information on corn bran arabinoxylan and to determine if the proposed uses are safe and suitable and can be considered Generally Recognized As Safe (GRAS) based on scientific procedures. The GRAS Panel consisted of Madhusudan G. Soni, Ph.D., FACN, FATS (Soni & Associates Inc.) and Professor Joanne L. Slavin, Ph.D., M.S., R.D. (University of Minnesota – Department of Food Science and Nutrition). The Curriculum Vitae for each of the GRAS Panel members is provided in Appendix A of this report.

A technical dossier, "Safety Evaluation Dossier Supporting a Generally Recognized As Safe (GRAS) Conclusion for Corn Bran Arabinoxylan in Conventional Foods" (issued 10 February 2021, revised 08 March 2021), was prepared by Toxicology Regulatory Services, Inc., SafeBridge Regulatory and Life Sciences Group, a Trinity Consultants Company (TRS) and made available to the GRAS Panel. The dossier contained data and information on the characterization, method of manufacture, product specifications and stability, proposed levels of use, consumer exposure estimates, and safety assessment of corn bran arabinoxylan. The GRAS Panel, independently and collectively, critically evaluated this document and other published information deemed appropriate, and convened by teleconference moderated by TRS on 23 February 2021.

The GRAS Panel unanimously concluded that the proposed uses of corn bran arabinoxylan, manufactured consistent with current Good Manufacturing Practice (cGMP) and meeting appropriate food-grade specifications, are safe and suitable and GRAS based on scientific procedures. A summary of the basis for this conclusion appears below.

Basis for GRAS Conclusion for the Proposed Uses of Corn Bran Arabinoxylan

GRAS Material Identity and Method of Manufacture

Corn bran arabinoxylan (BFG) is a hemicellulose primarily comprised of water soluble arabinoxylan. BFG is prepared by an alkali-hydrothermal process that fractionates corn bran lignocellulosic material, followed by enzymatic (endo- β -1,4-xylanase) hydrolysis that produces lower molecular weight fragments of arabinoxylan. BFG is produced in accordance with current Good Manufacturing Practice (cGMP).

BFG is expected to be stable and without degradation for at least two years when kept in a sealed container under cool, dry storage conditions.

Specifications and respective analysis of representative batches of BFG ensure that residual pesticides, heavy metals, and microbial contaminants are absent from the product or are below levels that would present a safety concern. AgriFiber maintains raw material specifications that ensure that every lot of raw agricultural material used to produce BFG (i.e., corn bran) is analyzed for microbial contaminants and heavy metals. In addition, the raw materials are routinely analyzed for aflatoxins, vomitoxin, and pesticides.

BFG is a corn bran arabinoxylan that contains between 74% to 90% dietary fiber, with a neutral monosaccharide composition comprised of around 49% xylose, 43% arabinose, and 8% galactose (total weight of neutral monosaccharides). Sections of the arabinoxylan chain are further substituted with ferulic acid and glucuronic acid. The product exhibits an arabinose-to-xylose (A/X) ratio around 0.84 to 0.88, which is comparable to the A/X ratio among arabinoxylans derived from different grain species (e.g. typically from 0.3 to 1.1) (Izydorczyk and Biliaderis, 2007; Rose et al., 2010). Uronic acids comprise approximately 17% of the BFG ingredient, which is in the range of uronic acid residues found in other dietary fiber sources (e.g. 4.4% in wheat bran, 6.5% in apple, 11.1% in carrot, 22.4% in potato fiber (Theander et al., 1995)). The total amount of free and bound ferulic acid in BFG as determined from analysis of representative samples was $\leq 1.2\%$.

There are no known self-limiting use levels of corn bran arabinoxylan (BFG) for its intended use as a source of dietary fiber, as a formulation aid (e.g., binder and gelling agent), as a texturizer, and as a stabilizer and thickener (e.g., emulsifier) within select foods and beverages.

Intended Use and Consumer Exposure

Corn bran arabinoxylan (BFG) is proposed for use as a formulation aid (binder/gelling agent/texturizer/stabilizer/thickener/emulsifier) at a maximum use level of 3% and a good source of fiber at a maximum use level of 3.8 g/serving in a variety of food categories. BFG is also proposed for use as an excellent source of dietary fiber at a maximum level use level 7.6 g/serving in yogurt, smoothies and grain drinks, and powdered nutritional supplements. BFG is not intended for use in meat and poultry products, which are under the jurisdiction of the United States Department of Agriculture (USDA), or in infant

formula. Average and high-end consumer intake of BFG from AgriFiber's proposed uses is estimated to range from 5 to 27 g/day (providing a dietary fiber intake of up to 24.3 g/day based on a maximum dietary fiber content of 90%), for the total U.S. population.

The proposed uses of BFG are considered to be substitutional for current uses of similar GRAS Notified dietary fiber materials, such as corn hull fiber, xylo-oligosaccharides (XOS) and/or arabinoxylo-oligosaccharides (AXOS) derived from wheat, corn, or sugarcane (GRN 343, 427, 458, 816 [FDA, 2010, 2012, 2013, 2019]). Therefore, the proposed uses of BFG are unlikely to further increase the intake of these dietary fiber materials.

Safety Evaluation

Introduction

In 2018, the US FDA included arabinoxylan (AX) among the list of eight additional nondigestible carbohydrates that meet the Agency's definition of dietary fiber, including AX alone or as a constituent of mixed plant cell wall fiber ingredients isolated from cereal grains, along with celluloses, pectins, lignins, and/or β -glucans. FDA's decision to include AX in the definition of dietary fiber was supported by the strength of the evidence demonstrating that AX can induce beneficial physiological effects on blood glucose and insulin levels (FDA, 2018). The EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) similarly concluded that a cause and effect relationship has been established between the consumption of wheat endosperm derived AX and reductions in post-prandial glycaemia; thus, advising that 8 g of AX-rich fiber produced from the wheat endosperm per 100 g of available carbohydrates should be consumed by individuals who wish to reduce their post-prandial glycaemic response (EFSA, 2011).

The FDA (2018) has noted the existence of several GRAS Notifications for isolated plant cell wall fibers. These include GRAS Notices Nos. 366 (oat hull fiber), 368 (corn hull fiber [resubmitted as GRN 427]), 373 (rice bran fiber), 430 (sugar beet fiber), 478 (rice hull fiber), 525 (pea fiber), and 599 (citrus fiber), all of which have received FDA Letters of No Questions. In addition to the 2018 FDA review, GRAS Notifications for AXOS and XOS (the major hydrolysis products of AX) derived from corn, wheat, and sugarcane have also received Letters of No Questions from FDA (e.g., GRN 427 [FDA, 2012]; GRN 343 [FDA, 2010], GRN 458 [FDA, 2013], GRN 816 [FDA, 2019]). Furthermore, the EFSA NDA Panel concluded in 2018 that XOS were safe under the proposed uses and use levels as novel food pursuant to Regulation (EU) 2015/2283.

Literature Review

The GRAS conclusion for the proposed use of corn bran arabinoxylan (BFG) included a comprehensive literature search performed by TRS in January 2021 using the National Library of Medicine (NLM) PubMed database as well as subscription-based literature database access (i.e., ToxPlanet, Timberlake Ventures, Inc.) to identify all relevant safety

data for corn bran arabinoxylan (corn bran AX) and related materials, including arabinoxylan (AX), arabinoxylo-oligosaccharides (AXOS), and xylo-oligosaccharides (XOS).

Overview of Safety Database Supporting GRAS Conclusion

Corn bran arabinoxylan (corn bran AX; BFG) shows structural similarities with those AXs commonly consumed in the diet and meets the FDA's expanded definition of dietary fiber (FDA, 2018).

Corn bran AX (BFG) is expected to be degraded in the colon by specialized microbes that encode AX-degrading glycosidase within their genomes, releasing AXOS as the major hydrolysis product (Nguyen et al., 2020). AXOS undergo further fermentation in the colon by secondary fermenters, which contributes to the net formation of hydrogen, carbon dioxide, and beneficial short-chain fatty acids (SCFA), primarily acetate, propionate, and butyrate (Grootaert et al., 2007; Broekaert et al., 2011; Nguyen et al., 2020). The fermentation of AXOS is also associated with the release and absorption of ferulic acid (François et al., 2010; Napolitano et al., 2009). Both SCFA and ferulic acid are considered to be benign well-metabolized digestion products that are also produced upon digestion of natural plant-derived fibers present in a regular healthy diet rich in cereals, fruits, and vegetables (François et al., 2010). Therefore, the metabolism of BFG does not raise safety concerns.

Based on the published data for AX and AXOS (the major hydrolysis products of AX), there is no concern for genotoxicity or mutagenicity of BFG and no systemic toxicity is expected to follow ingestion of BFG.

A large body of clinical safety evidence exists for AX and AXOS (the major hydrolysis products of AX), with the only side effects noted at high levels of intake, related to transient gastrointestinal effects that are commonly seen with other non-digestible carbohydrates and expected to be self-limiting. BFG (corn bran AX) specifically was determined to be safe and well tolerated at daily doses of 25 g (females) or 35 g (males) for 6 weeks (Nguyen et al. 2020; Deehan et al., 2020a/b [manuscripts in preparation]; Deehan et al., 2021 [unpublished report]).

The data and information reported in the additional publications identified within the current literature search and summarized in the GRAS Technical Dossier do not present a safety concern or contradict a GRAS conclusion for proposed uses of corn bran arabinoxylan.

Allergenicity

Corn bran arabinoxylan (BFG) does not contain any of the eight allergens that are considered to be major food allergens under the United States Food Allergen Labelling and Consumer Protection Act of 2004 (FALCPA). Products containing BFG may be labeled appropriately to inform consumers to the presence of corn derived ingredients.

Conclusion

We, the independent qualified members of the GRAS Panel, have individually and collectively critically evaluated the data and information summarized above, and other published data and information that we deemed pertinent to the safety of the proposed uses of corn bran arabinoxylan (BFG) as a source of dietary fiber and as a formulation aid (binder/gelling agent/texturizer/stabilizer/thickener/emulsifier) in select foods and beverages. We unanimously conclude that the proposed uses of BFG, produced consistent with current good manufacturing practice (cGMP) and meeting appropriate food grade specifications, are safe and suitable and Generally Recognized As Safe (GRAS) based on scientific procedures.

It is our opinion that other qualified experts would concur with these conclusions.

Madhusudan G. Soni, Ph.D., FACN, FATS Soni & Associates Inc.

March 09, 2021

Date

Joanne L. Slavin, Ph.D., M.S., R.D. Professor, Department of Food Science and Nutrition University of Minnesota

mach 10, 2021

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References

Broekaert WF, Courtin CM, Verbeke K, Van de Wiele T, Verstraete W, Delcour JA. 2011. Prebiotic and Other Health-Related Effects of Cereal-Derived Arabinoxylans, Arabinoxylan-Oligosaccharides, and Xylooligosaccharides. Critical Reviews in Food Science and Nutrition. 51:2: 178-194.

Deehan EC, Zhang Z, Riva A, Armet AM, Nguyen NK, Perez-Muñoz ME, Krysa JA, Seethaler B, Zhao YY, Cole J, Li F, Hausmann B, Spittler A, Laville M, Delzenne NM, Curtis JM, Wismer WV, Proctor SD, Bakal JA, Bischoff SC, Knights D, Field CJ, Berry D, Prado CM, Walter J. 2020a. Elucidating the role of the gut microbiota in the physiological effects of dietary fiber in adults with excess body weight. *Manuscript in preparation*.

Deehan EC, Zhang Z, Nguyen NK, Perez-Muñoz ME, Riva A, Cole J, Berry D, Prado CM, Walter J. 2020b. Gastrointestinal tolerance to high doses of arabinoxylan is dependent on the gut microbiota. *Manuscript in preparation*. [As cited in: Deehan *et al.*, 2021 (*Unpublished report*)]

Deehan EC, Zhang Z, Walter J. 2021. Clinical and gastrointestinal assessment of corn bran isolated arabinoxylan in adults with overweight and obesity. *Unpublished Report prepared for AgriFiber Solutions, LLC*.

EFSA (European Food Safety Authority). 2011. Scientific Opinion on the substantiation of health claims related to arabinoxylan produced from wheat endosperm and reduction of post-prandial glycaemic responses (ID 830) pursuant to Article 13(1) of Regulation (EC) No 1924/2006. EFSA Journal. 9(6):2205. doi: 10.2903/j.efsa.2011.2205

FDA (US Food and Drug Administration). 2010. Agency Response to GRN 343. Letter of No Questions dated Nov 22, 2010.

https://wayback.archive-

it.org/7993/20171031012303/https://www.fda.gov/Food/IngredientsPackagingLabeling/ GRAS/NoticeInventory/ucm235936.htm

FDA (US Food and Drug Administration). 2012. Agency Response to GRN 427. Letter of No Questions dated September 12, 2012.

https://wayback.archive-

it.org/7993/20171031010105/https://www.fda.gov/Food/IngredientsPackagingLabeling/ GRAS/NoticeInventory/ucm323888.htm

FDA (US Food and Drug Administration). 2013. Agency Response to GRN 458. Letter of No Questions dated Aug 23, 2013.

https://wayback.archive-

it.org/7993/20171031005345/https://www.fda.gov/Food/IngredientsPackagingLabeling/ GRAS/NoticeInventory/ucm368038.htm FDA (US Food and Drug Administration). 2018. Review of the Scientific Evidence on the Physiological Effects of Certain Non-Digestible Carbohydrates. Scientific review. https://www.fda.gov/media/113659/download

FDA (US Food and Drug Administration). 2019. Agency Response to GRN 816. Letter of No Questions dated Apr 29, 2019. https://www.fda.gov/media/129545/download

François IE, Lescroart O, Veraverbeke WS, Kubaszky R, Hargitai J, Esdaile DJ, Beres E, Soni MG, Cockburn A, Broekaert WF. 2010. Safety Assessment of a Wheat Bran Extract Containing Arabinoxylan-Oligosaccharides: Mutagenicity, Clastogenicity, and 90-Day Rat-Feeding Studies. International Journal of Toxicology. 29(5) 479-495

Grootaert C, Delcour JA, Courtin CM, Broekaert, WF, Verstraete W, Van de Wiele T. 2007. Microbial metabolism and prebiotic potency of arabinoxylan oligosaccharides in the human intestine. Trends in Food Science and Technology. 18(2):64-71. 10.1016/j.tifs.2006.08.004. [As cited in: FDA, 2018]

Izydorczyk, M.S. and Biliaderis, C.G. 2007. Arabinoxylans: Technologically and Nutritionally Functional Plant Polysaccharides. *Functional Food Carbohydrates*. 1st edition:249-90.

Napolitano A, Costabile A, Martin-Pelaez S, Vitaglione P, Klinder A, Gibson GR, Fogliano V. 2009. Potential prebiotic activity of oligosaccharides obtained by enzymatic conversion of durum wheat insoluble dietary fibre into soluble dietary fibre. Nutrition, Metabolism and Cardiovascular Diseases. 19(4):283-290. doi: 10.1016/j.numecd.2008.07.005. [As cited in: François *et al.*, 2010]

Nguyen NK, Deehan EC, Zhang Z, Jin M, Baskota N, Perez-Muñoz ME, Cole J, Tuncil YE, Seethaler B, Wang T, Laville M, Delzenne NM, Bischoff SC, Hamaker BR, Martínez I, Knights D, Bakal JA, Prado CM, Walter J. 2020. Gut microbiota modulation with long-chain corn bran arabinoxylan in adults with overweight and obesity is linked to an individualized temporal increase in fecal propionate. Microbiome. 8:118.

Rose DJ, Patterson JA, Hamaker BR. 2010. Structural differences among alkali-soluble arabinoxylans from maize (*Zea mays*), rice (*Oryza sativa*), and wheat (*Triticum aestivum*) brans influence human fecal fermentation profiles. *J Agric Food Chem*. 58(1):493-99. [As cited in: Deehan *et al.*, 2021 (Unpublished report)]

Theander O, Aman P, Westerlund E, Andersson R, Pettersson D. 1995. Total dietary fiber determined as neutral sugar residues, uronic acid residues, and Klason lignin (the Uppsala method): collaborative study. *J AOAC Int.* 78(4):1030-1044.

Appendix A

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Slavin, Joanne

eRA COMMONS USER NAME (credential, e.g., agency login): jslavin

POSITION TITLE: Professor

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Wisconsin - Madison	BS	05/1974	Dietetics
University of Wisconsin - Madison	MS	05/1078	Nutritional Sciences
University of Wisconsin - Madison	PhD	05/1981	Nutritional Sciences
University of Wisconsin - Madison	RDN	05/1978	Traineeship in Dietetics

A. Personal Statement

I am a nutritionist and registered dietitian nutritionist (RDN) with more than 35 years of research and student advising experience. I have been the lead on a wide range of nutrition research studies that link food exposures to health outcomes. I have completed more than 80 graduate students in both Nutrition and Food Science at the University of Minnesota with a range of nutrition topics, mostly focused on dietary fiber, protein, and dietary guidance. I teach Advanced Human Nutrition, a writing intensive course, twice per year and have completed more than 5000 students. All of my research is conducted with undergraduate and graduate students. Some representative papers, of more than 300 published refereed articles are listed below.

a. Erickson J, Sadegjirad B, Lytvyn L, Slavin J, Johnston BC. (2016) The scientific basis of guidelines recommendations on sugar intake: A systematic review. Ann Intern Med doi:10.7326/M16-2020.

b. Hess JM, Wang Q, Kraft C, Slavin JL (2017) Impact of Agaicus bisporus mushroom consumption on satiety and food intake. Appetite Jun 21. Pii: S0195-663(17)30599-8.

c. Carlson JL, Erickson JM, Hess JM, Gould TJ, Slavin JL (2017) Prebiotic dietary fiber and gut health: Comparing the in vitro fermentations of beta-glucan, inulin and xylooligosaccharide. Nutrients. Doi: 10.3390/nu0121361. d. Hess JM, Slavin JL. (2018) The benefits of defining "snacks". Physiology & Behavior https://doi.org/10.1016/j.physbeh.2018.04.019.

e. Carlson J, Erickson JM, Lloyd B, Slavin J. (2018) Health effects and sources of prebiotic dietary fiber. Curr Dev Nutr 2018;2:nzy005.

f. Koecher KJ, McKeown NM, Sawicki CM, Menon RS, Slavin JL. (2019) The effect of whole grain consumption on changes in fecal microbiota: A review of human intervention trials. Nutr Rev 77(7):487-497.

g. Ahnen RT, Jonnalagadda SS, Slavin JL. (2019) The role of plant protein in nutrition, wellness, and health. Nutr Rev doi: 10.1093/nutrit/nuz028.

h. Paruzyhski H, Korczak R, Wang Q, Slavin J. (2020) A pilot and feasibility study of oatmeal consumption in children to assess markers of bowel function. J. Medicinal Foods. doi: 10.1089/jmf.2019.0158.

i. Willis HJ, Slavin JL. (2020) The influence of diet interventions using whole, plant food on the gut microbiome: A narrative review. J. Acad Nutrt Diet. 120(4):608623.

j. Hirahatake KM, Astrup A, Hill JO, Slavin JL, Allison DB, Maki KC. (2020) Potential cardiometabolic health benefits of full-fat dairy: The evidence base. Adv Nutr 11:533-547.

k. Swanson KS, de Vos WM, Martens EC, Gilbert JA, Menon RS, Sota-Vaca A, Hautvast J, Meyer PD, Borewicz K, Vanghan EE, Slavin JL. (2020) Effect of fructans, prebiotics and fibres on the human gut microbiome assessed by 16S rRNA-based approaches: A review. Beneficial Microbes. 11(2):101-129.

I. Raiten DJ, Allen LH, Slavin JL, Mitloehner FM, Thoma GJ, Haggerty PA, Finley JW. (2020) Understanding the intersection of climate-environmental change, heath, agriculture and improved nutrition: A case study on micronutrient nutrition and animal source foods. Curr Develop Nutr (in press).

B. Positions and Honors

1957 - present	Farm hand and owner, Slavin Sisters Farm LLC, Walworth, WI
1974 - 1975	Nutritionist, Waisman Center for Inborn Errors, Madison WI
1975 - 1981	Research Assistant, UW-Madison, Department of Nutritional Sciences
1981 - 1986	Extension Nutritionist, University of Minnesota, St. Paul, MN
1981 - 1986	Assistant Professor, Department of Food Science and Nutrition, U of MN
Spring 1984	Quarter leave, Melpomene Institute, St. Paul, MN; topic: Importance of nutrition in sports- related amenorrhea
1986 - 1991	Associate Professor, Department of Food Science and Nutrition, U of MN
1991	Quarter leave, Memorial Sloan Kettering, New York NY, Dr. Martin Lipkin; Effect of fiber on cell proliferation
1991 - present	Professor, Department of Food Science and Nutrition, U of MN
2006	Semester leave, Nestle Research Center, Lausanne, Switzerland, with Dr. Hilary Green;
	The whole story: Clarifying confusion between whole grains and fiber
2008 - 2010	Member of the 2010 Dietary Guidelines for Americans Advisory Committee (DGAC)
2011	Sabbatical leave, fall semester, Research topic: The challenges of dietary guidance
2013	American Society of Nutrition (ASN) General Mills Institute of Health and Nutrition innovation Award
2014	Semester leave spent at the University of Colorado Medical Center, Aurora CO, with Dr. Jim Hill on energy conversion from dietary fiber
2015	ASN WO Atwater Award and lecture, sponsored by USDA/ ARS

C. Contributions to Science

1. My early publications were in the area of dietary fiber, but also in a wide range of topics supporting my Extension appointment. These publications included mineral needs of athletes, amino acid supplements for athletes, and computer assisted nutrient analysis. The early work on dietary fiber also included papers on analysis of fiber, including HPLC analysis of sugars from fiber fractions. I was also involved in community projects, including diet and disease intervention projects. This work included collaborators in the Division of Epidemiology and communities in Minnesota. My time as an Extension Nutritionist gave me skills in nutrition education, beyond the basic science skills that were the basis of my work in dietary fiber.

- a. McNamara, E.A., Levitt, M.D. & Slavin, J.L. (1986) Breath hydrogen and methane: Poor indicators of apparent digestion of soy fiber. Am. J. Clin. Nutr. 43, 898-902.
- Slavin, J.L. (1987) Dietary fiber: Classifications, chemical analyses and food sources. J. Am. Diet. Assoc. 87, 1164-1171.
- c. Slavin, J.L., Lanners, G. & Engstrom, M.A. (1988) Amino acid supplements for athletes. Phys. Sports Med. 16(3), 221-224.
- d. Slavin, J.L. (1990) Communicating nutrition information: Whose job is it? Food Tech. 44(10), 70-74.
- e. Potter, J.D., Graves, K., Finnegan, J.R., Mullis, R.M., Baxter, J.S., Crockett, S., Elmer, P.J., Gloeb, B.D., Hall, N.J., Hertog, J., Pirie, P., Richardson, S.F., Rooney, B., Slavin, J., Snyder, M.P., Splett, P. & Viswanath, L.

(1990) The cancer and dietary intervention project: A community-based intervention to reduce nutrition-related risk of cancer. Health Education Research: Theory and Practice 5,489-503.

- 2. Our body of work in the 1990s mostly included studies on biomarkers of interest in cardiovascular disease, as interest in oat bran and cholesterol lowering was popular. Other areas of interest were soy and flax and changes in estrogen metabolites. We were also involved in fruit and vegetable intervention studies, which included work classifying fruits and vegetables into phytochemical categories. Additional work included measurements of phytochemicals, phytoestrogens, and other plant compounds. We also published papers on whole grains and disease protection, showing a shift from focus on nutrients and phytochemicals to whole foods.
 - a. Lampe JW, Fredstrom S, Slavin JL, Potter JD (1993) Sex differences in colonic function: A randomized trial. *Gut* 34, 531-536.
 - b. Fredstrom SB, Jung H, Halgerson JL, Eyden CA, Slavin JL (1994) A trial of near infrared reflectance spectroscopy in a human fiber digestibility study. *J Food Agrc Chem* 42, 735-738.
 - c. Lampe JW, Martini MC, Kurzer MS, Adlercreutz H, Slavin JL (1994) Urinary lignan and isoflavonoid excretion in premenopausal women consuming flaxseed powder. *Am J Clin Nutr* 60, 122-128.
 - d. Campbell DR, Gross MD, Martini MC, Granditis G, Slavin JL, Potter JD (1994) Plasma carotenoids as biomarkers of vegetable and fruit intake. *Cancer Epidemiol Biomarkers Prevention* 3:493-500.
 - e. Martini MC, Lampe JW, Slavin JL, Kurzer MS (1994) Effect of the menstrual cycle on energy and nutrient intake. *Am J Clin Nutr* 60:895-899.
 - f. Hutchins AM, Slavin JL, Lampe JW (1995) Urinary isoflavonoid phytoestrogen and lignan excretion with fermented and unfermented soy products. *J Am Diet Assoc* 95:545-551.
 - g. Martini MC, Campbell DR, Gross MD, Grandits GA, Potter JD, Slavin JL (1995) Plasma carotenoids as biomarkers of vegetable intake: The CPRU feeding studies. *Cancer Epidmiol Biomarkers Prevention* 4:491-496.
 - h. Smith S, Campbell DR, Elmer PJ, Martini MC, Slavin JL, Potter JD (1995) The University of Minnesota Cancer Prevention Research Unit vegetable and fruit classification scheme. *Cancer Causes and Control* 6(4):292-302.
 - i. Jacobs D, Slavin J, Marquart L (1995) Whole grain intake and cancer: a review of the literature. *Nutrition and Cancer* 24:221-229.
 - j. Karr SC, Lampe JW, Hutchins AM, Slavin JL (1997) Urinary isoflavonoid excretion in humans is dosedependent at low to moderate levels of soy consumption. *Am J Clin Nutr* 66:46-51.
 - k. Jacobs DR, Marquart L, Slavin J, Kushi LH (1998) Whole grain intake and cancer: An expanded review and meta-analysis. *Nutr and Cancer* 30:85-96.
 - I. Slavin JL, Martini PC, Jacobs D, Marquart L. (1999) Plausible mechanisms for protectiveness of whole grains. *Am J Clin Nutr* 70(suppl) 459S-463S.
- 3. Since 2000, our work has included extensive studies on satiety, with whole foods, fiber, and protein interventions, studies on gut health changes with foods and isolated fibers, and extensive work on policy including fiber, added sugars, and protein. We have worked in the gut microbiota area since our early fiber trials, but are now using more state of the art technologies, which present new challenges. Our most recent work includes studies on FODMAPS, compounds that cause problems in gut function. We continue to work across the wide range of human nutrition and enjoy collaboration with a wide range of investigators.
 - a. Grabitske HA, Slavin JL. (2009) Gastrointestinal effects of low-digestible carbohydrates. *Cr Rev Food Science Nutr* 49:327-360.
 - b. Bonnema A, Thomas W, Kolberg L, Slavin JL. (2010) Gastrointestinal tolerance of chicory inulin products. *J Am Diet Assoc* 110:865-868.
 - c. Willis HJ, Thomas W, Willis DJ, Slavin JL. (2011) Feasibility of measuring gastric emptying time, with a wireless motility device, after subjects consume fiber-matched liquid and solid breakfasts. *Appetite* 57:38-44.

- d. Clark MJ, Robien K, Slavin J (2012) A systematic review of the effect of prebiotics on biomarkers of colorectal cancer in humans. *Nutr Rev* 70:436-443.
- e. Hess J, Latulippe ME, Ayoob K, Slavin J (2012) The confusing world of dietary sugars: definitions, intakes, food sources and international dietary recommendations. *Food and Function* May;3(5):477-486.
- f. Timm DA, Thomas W, Boileau TW, Williamson-Hughes PS, Slavin JL (2013) Polydextrose and soluble corn fiber increase fecal weight and influence fecal chemistry in healthy men and women. *J Nutr* 143(4):473-478.
- g. Clark MJ, Slavin JL. (2013) The effect of fiber on satiety and food intake: a systematic review. *J Am Coll Nutr* 32(3):200-211.
- h. Koecher KJ, Thomas W, Slavin JL. (2013) Healthy subjects experience bowel changes on enteral diets: Addition of a fiber blend attenuates stool weight and gut bacteria decreases without changes in gas. JPEN J. Parenter Enteral Nutr 39, 337-343.
- i. Bonnema AL, Altschwater D, Thomas W, Slavin JL. (2015) The effects of a beef-based meal compared to a calorie matched bean-based meal on appetite and food intake. *J Food Sci* DOI:10.1111/1750.3841.12991.
- j. Goldfein KR, Slavin JL (2015) Why sugar is added to food: Food Science 101. (2015) Comp Rev Food Sci Food Safety.doi:10.1111/1541.4337.12151.
- Carlson J, Esparza J, Swan J, Taussig D, Combs J, Slavin J. (2016) In vitro analysis of partially hydrolyzed guar gum fermentation differences between six individuals. *Food and Function* DOI: 10.1039/c5fo01232e.
- Marinangeli CPF, Curran J, Barr SI, Slavin J, Puri S, Swarinathan S, Tapsell L, Patterson CA. (2017) Enhancing nutrition with pulses: defining a recommended serving size for adults. Nutr Rev doi: 10.1093/nutrit/nux058.
- m. Petersen KS, Flock MR, Richter CK, Mukherjea R, Slavin JL, Kris-Etherton PM. (2017) Healthy dietary patterns for preventing cardiometabolic disease: the role of plant-based foods and animal products. Current Developments in Nutrition DOI: 10.3945/cdn.117.001289.
- n. Korczak R, Slavin J. (2018) Fructooligosaccharides and appetite. Curr Opin Clin Nutr Metab Care 21:377-380.
- o. Klurfeld DM, Davis CD, Karp RW, Allen-Vercoe E, Change EB, Chaissaing B, Fahey GC, Hamaker BR, Holscher HD, Lampe JW, Marette A, Martens E, O-Keefe LKSJ, Rose DJ, Saarela M, Schneeman BO, Slavin JL, Sonnenburg JL, Swanson KS, Wu GD, Lynch CJ. (2018) Considerations for best practices in studies of fiber or other dietary components and the intestinal microbiome. Am J Physiol Endocrinol Metab doi: 10:1152/ajpendo.00058.2018.
- p. Vega-Lopez S, Venn BJ, Slavin JL (2018) Relevance of the glycemic index and glycemic load for body weight, diabetes, and cardiovascular disease. Nutrients 10, 1361:doi:10,3390/nu10101361,
- q. Hess J, Wang Q, Gould T, Slavin J (2018) Impact of Agaricus bisporus mushrooms consumption on gut health markers in healthy adults. Nutrients 10, 1402;doi:10.3390/nu10101402.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing research support

Minnesota Experiment Station - Defining a desirable intake of dietary fiber - 1984 - present

This institutional support covers my research salary and our work on dietary fiber.

Current funded projects

Taiyo International, The effect of Sunfiber on fecal microbiota, October 2018 – December 31, 2020

Nexira, Satiety and blood glucose response with doses of acacia gum fiber, September 2018 – December 31, 2020

Barilla, Determination of the nutrient content of pasta samples with an emphasis on dietary fiber methods, 09/01/19 – 8/31/2021

Mn Beef Council, Effects of iron deficiency during infancy, adolescence and early adulthood: Does consumption of beef make a difference, CO-PI with Dr. Renee Korczak, 07/01/18 – 06/30/20

Research support within past 5 years

Barilla, Satiety effects of protein and fiber added to pasta, October 2012 - October 2014

American Egg Board, Satiety effects of protein and fiber: the combination of whole grains and protein, September 2012 – August 2015

Novartis Consumer Health, In vitro measurement of gas production, October 2013 – December 2015,

American Pulse Association, Satiety effects of pulses compared to protein smoothie, September 2014 – August 2016

USDA, The effect of selenium on the growth of human fecal microbes, June 2015- May 2016

Pepsico, Dietary fiber and digestive health in children: A systematic review, October 2015 – September 2016

Welch's Company, Effect of white grape juice on digestive health, September 2015 – August 2016

Mushroom Council, Mushrooms enhance satiety and gut health, June 2015 - May 2017

ILSI, Scientific basis for sugar guidance from authoritative bodies, September 2015 – August 2017

DSM, The effect of Oatwell oat beta glucan on bowel function, December 2015 – November 2019

DSM, Prebiotic effect of different dietary fibers in an in vitro system, October 2015 – September 2016

Pepsico, Effect of instant oatmeal on constipation in children, October 2015 - September 2016

Pepsico, Comprehensive Literature review – A global perspective on nutrition and food science of legumes, June 2016 – December 2017,

MnDrive Global Food Ventures, Reinventing year-round local food production in Minnesota, John Erwin, PI, Carl Rosen/Joanne Slavin/Greg Schweser, Co-PIs, June 2014 – May 2015

Nestle Health Sciences, Effect of a low FODMAP Oral nutrition supplement on breath hydrogen, Renee Korczak, Co-PI, June 2015 – January 2017

Curriculum Vitae

Madhusudan G. Soni, PhD, FACN, FATS President Soni & Associates Inc. 749 46th Square Vero Beach, FL 32968 Phone: 772-299-0746 Cell: 772-538-0104 Email: <u>sonim@bellsouth.net</u> <u>www.soniassociates.net</u>

2019

CURRICULUM VITAE

MADHUSUDAN G. SONI, PHD, FACN, FATS 749 46th Square Vero Beach, FL 32968

Telephone: 772-299-0746

PROFESSIONAL EXPERIENCE:

Consulting Toxicologist Soni and Associate Inc.

Evaluate safety and toxicity data on foods, food additives, dietary supplements, cosmetics and provide information/reports for regulatory purposes to various clients including corporations, law firms and individuals. Extensive experience in searching and evaluating the scientific literature in a number of subject areas.

Director of Research Vero Beach Hematology Oncology

Review study synopsis and protocols for clinical trials and provide feedback. Manage and coordinate pharmaceutical clinical trials.

Senior Toxicologist Consulting Firm, Vero Beach, Florida

Provided scientific information to various clients for regulatory petitions such as Generally Recognized As Safe (GRAS) and New Dietary Ingredient (NDI) notifications. Responsible for the generation of number of technical reports (over 150) as a consultant and as a scientist.

Research Assistant Professor/ Senior Research Associate Nov. 1996-May 1999 Northeast Louisiana University, Monroe, Louisiana

Conducted experiments and prepared reports on improvements in standard risk assessment procedures for the ATSDR, CDC.

Research Officer/Scientist National Institute of Nutrition, Hyderabad, India

Responsible for planning and conducting the research project on "Identification of Individual at High Risk of Chemical Carcinogenesis".

Area Grant Researcher

Department of Chemistry, Tougaloo College, Mississippi

Isolation and characterization of tRNA

October 2006 - Present

June 1999-Sept. 2005

October 2005-2008

Nov. 1991-Dec. 1996

April 1991 - June 1991

E-mail: msoni@soniassociates.net

Facsimile: 772-299-5381

Research AssociateJune 1988 – March 1991University of Mississippi Medical Center, Jackson, Mississippi

Mechanisms of cell injury and repair.

Post Doctoral Fellow Jichi Medical School, Tochigi, Japan

Oct. 1986-April 1988

Mechanisms of cadmium toxicity.

ACADEMIC QUALIFICATIONS:

- 1. B. S. 1977, Chemistry, Marathwada University, Aurangabad, India.
- 2. M. S. 1979, Biochemistry (Biochemical Pharmacology and Toxicology), Marathwada University, Aurangabad, India.
- 3. Ph.D. 1984, Biochemistry (Biochemical Pharmacology and Toxicology), (Thesis: Studies on cytochrome P-450), Marathwada University, Aurangabad, India.
- 4. Japanese Language Certificate Course, 1987, Tsukuba University, Tsukuba, Japan.

HONORS & AWARDS:

<u>Most prolific GRAS Expert Panelist</u> [ranked in top five, as per an independent publication in Food Chemical Toxicology 105 (2017) 140-150]

Fellow Academy of Toxicological Science (F-ATS) 2012

Honorary member of Stevia Global Forum

Fellow American College of Nutrition (F-ACN) 2004

Board of Publications, Best Paper Award in Toxicology Applied Pharmacology 1999.

- Best Paper Award (co-author), Food Safety Specialty Section, Society of Toxicology, New Orleans, LA 1999.
- **Best Paper Award**, Risk Assessment Specialty Section, Society of Toxicology, Seattle, Washington 1998.

International Society for Study of Xenobiotics Award 1997, Hilton Head, SC.

Best Paper award, South Central Chapter Society of Toxicology 1996 Meeting, Oxford, MS.

Mixture Research Fellowship 1997, Fort Collins, CO.

Gordan Research Conference Travel & Registration award 1996, Hennikar, NH.

Monbusho Scholar 1986-1988, Jichi Medical School, Tochigi, Japan.

13th International Society for Fluoride Research Conference, Travel award 1983, New Delhi, India

Society of Biological Chemists meeting, Travel award 1981, Barodra, India

Merit Scholar, M.Sc. 1977-1979.

Akhil Bhartiya Vidyarthi Parishad (ABVP) First in Town Award B.S. (1977).

Merit Scholar (High School) 1970-1972, Multi Purpose High School, Parbhani, India.

PEER REVIEW & OTHER COMMITTEES:

- **Expert Review Panel:** U.S. Environmental Protection Agency- IRIS reference dose determination document. Evaluate document and attend peer review workshop on 1,1,2,2-Tetrachloroethane, October 14, 2008 in Alexandria VA.
- International Advisory Committee: 4th International Niigata Symposium on Diet & Health, Japan, November 29-30, 2008.
- **Mixtures Expert Panel Reviewer.** Agency for Toxic Substances and Disease Registry, US Department of Health and Human Services 1997; 2000.
- **Expert Panel Reviewer.** U.S. Environmental Protection Agency. Evaluate documents identifying chemicals for cumulative risk assessment based on common mechanisms of action and toxicity. Attended the External Review Workshop on July 9 and 10, 2002 at EPA's Cincinnati, Ohio office and led the discussion of organotin pesticides and participated on discussions of triazines and urea pesticides.
- **Reviewer for journals:** International Journal of Toxicology (Editorial Board member); Food and Chemical Toxicology; Journal of Toxicology and Environmental Health; Environmental Health Perspectives; Archives of Toxicology; Toxicological Sciences; Toxicology Mechanisms and Methods; Toxicology Letters; Regulatory Toxicology and Pharmacology; Journal of the Science of Food & Agriculture.
- EDITOR: 1. Vero Beach Hematology Oncology Newsletter (quarterly publication) 2005-2009;
 - 2. Consulting firm Newsletter (quarterly publication) 2000-2005

SYMPOSIUM/WORKSHOP ORGANIZED

- Session Chair and Speaker: "Arsenic, a Gift and Malice: From Discovery to Detrimental Effects, a Historical Perspective." Society of Toxicology meeting, March 11-15, 2018, San Antonio, TX (session approved by SOT).
- Session Speaker: "Clinical and toxicological aspects of Ayurvedic medicinal remedies with high levels of heavy metals" Society of Toxicology, March 14, 2017, Baltimore, MD.
- Session Chair: "Health Risks of Sodium (Salt) Intake: Too Much or Too Little?" Society of Toxicology, March 12, 2013, San Antonio, TX.
- Session Chair: "Chemical standardization of botanical medicine for safe and effective use as therapeutic agents" Society of Toxicology, March 15, 2012, San Franscisco, CA.
- Session Chair: "Safety of vitamins and minerals: Controversies and perspectives" Society of Toxicology, March 8, 2010, Salt Lake City, UT.
- Session Co-chair: "Melamine Contamination of Infant Formulas: Lessons Learned" Society of Toxicology, March 8, 2010, Salt lake City, UT.
- Stevia Global Summit: Speaker- Stevia-Derived Sweeteners: Safety, Regulatory and Technical Considerations. July 11, 2010, New Delhi, India
- **Session Chair:** "Safety of high intensity sweeteners: Bittersweet controversy" Society of Toxicology, March 17, 2009, Baltimore, MD.
- **Session Co-chair:** "A quarter of a century (1984-2009) since the Bhopal disaster: Lesson learned" Society of Toxicology, March 16, 2009, Baltimore, MD.
- Session Chair: "Verification of Food Safety" and presentation on "Controversy on safety of *Garcinia cambogia* extract: Lessons learned" at International Conference on Food Factors for Health Promotion (ICoFF2007), Nov 27- Dec 1, 2007, Kyoto, Japan.

- **Session Chair:** "To Dye or not to Dye: Safety of Oxidative Hair Dyes" Society of Toxicology, March 18, 2008, Seattle, WA.
- Session Chair: "Safety of Dietary Supplements Used for Weight Reduction: Lessons Learned" Society of Toxicology, March 29, 2007, Charolet, NC.
- **Session Chair:** "Potential Human Health Risk from Estrogenic Food and Consumer Product Additives: How Much is Real and How Much is Hype?" Society of Toxicology, March 7, 2006, San Diego, CA.
- Session Chair: "Role of Nutrigenomics in Safety Assessment of Functional Foods" Society of Toxicology, March 7, 2005, New Orleans

MEMBERSHIP OF SCIENTIFIC ORGANIZATIONS:

1. Society of Toxicology. 2. American College of Nutrition. 3. International Food Technology. 4. American College of Toxicology. 5. Autism Society of America. 6. Society of Biological Chemists, India. 7. MONBUSHO Scholars Association. 8. Society of Chemical Industry

CONTINUING EDUCATION COURSES:

2005: Development and Interpretation of Toxicokinetic Data for Risk and Safety Assessment, SOT, New Orleans, LA.

2004: (a) Herbals and dietary supplements in athletic performance enhancementfacts vs fiction; (b) Of mice and magnets- metabonomics technology in safety assessment, SOT, Baltimore, MD.

2003: Medicinal herbals and dietary supplements, SOT, Salt Lake City, UT.

2002: (1) Two-stepping through toxicogenomics: A basic premier; (2) Toxicology of naturally occurring toxins- Don't mess with mother nature, SOT, Nashville, TN.

2001: Neutraceutical/functional foods- Safety and regulation issue, SOT, San Francisco, CA.

2000: (a) Rodent toxicity and nongenotoxic carcinogenesis: Knowledge-based human risk assessment from molecular mechanisms; (b) Safety pharmacology and risk assessment, SOT, Philadelphia, PA.

1996: Mechanisms of Toxicity, Gordon Research Conferences, Heniker, NH.

- **1990:** Target organ toxicity: Advanced hepatotoxicity, SOT, Miami, Florida.
- **1989:** Immunology for the pharmacologist, ASPET, Salt Lake City Utah.

1980: Membrane Biology, Mahableshwar, Maharashtra, India.

TEACHING & LABORATORY DEMONSTRATION EXPERIENCE

- 1. Advanced toxicology lab at Northeast Louisiana University- 1996-1999.
- 2. Use of animals in toxicology course at LAISC, National Institute of Nutrition, India-1993-1995.
- 3. Toxicology lab demonstrations at Univ. of Mississippi Medical Center- 1989-1991.
- 4. Biochemistry lab demonstrations at Marathwada Univ., India- 1982-1986.

CLINICAL RESEARCH EXPERIENCE:

2005-2008

- 1. Once per cycle treatment of anemia with Darbepoetin alfa with iron in subjects with non-myeloid malignancies. Amgen 20060103; IND 8223
- 2. A multi-center phase III randomized, double-blind placebo-controlled study of the cancer vaccine Stimuvax[®] (L-BLP25 or BLP25 liposome vaccine) in non-small cell lung cancer (NSCLC) subjects with unresectable stage III disease
- 3. Perifosine 201- A Phase 1/2 trial of Perifosine in the treatment of non-small cell lung cancer
- 4. Perifosine 211- A randomized placebo-controlled study of Perifosine in combination with single agent chemotherapy for metastatic cancer patients
- 5. Perifosine 215- Placebo controlled double blind trial of Perifosine in combination with Docetaxel and Prednisone for patients with metastatic androgen independent prostate cancer.
- 6. A study to access impact of once per cycle correction and maintenance dosing of drug A in subjects with non-myeloid malignancies with anemia due to chemotherapy.
- A Phase 2, Randomized, double-blind, placebo-controlled study of drug A administered once every 4 weeks in the treatment of subjects with anemia of cancer

8. A dual–cohort, prospective, observational study of unresectable stage IIIB/IV nonsmall cell lung cancer patients with and without bone metastasis

PUBLICATIONS:

- Kothari, S., Saravana, M., Muthusamy, S., Mozingo, A., **Soni, M.**, 2018. Safety assessment of a standardized cucumber extract (Q-Actin[™]): Oral repeat-dose toxicity and mutagenicity studies. *Toxicology Reports* 5:1078-1086. doi:10.1016/j.toxrep.2018.10.014
- Chen, S.N., Chan, C.S., Chen, S., **Soni, M.G.**, 2018. Subchronic toxicity and genotoxicity studies of *Antrodia* mushroom β-glucan preparation. *Regulatory Toxicology and Pharmacology* 92: 429-438.
- Miraglia, N., Bianchi, D., Trentin, A., Volpi, N., **Soni, M.G.**, 2016. Safety assessment of non-animal chondroitin sulfate sodium: Subchronic study in rats, genotoxicity tests and human bioavailability. *Food Chemical Toxicology* 93:89-101.
- Ravi, K.B., Raghunatha Reddy, K.R., Shankaranarayanan, J., Jayant, J., Deshpande, V., Juturu, V., **Soni, M.G.**, 2014. Safety evaluation of zeaxanthin concentrate (OmniXan[™]): Acute, subchronic toxicity and mutagenicity studies. *Food Chemical Toxicology* 72: 30-39.
- Kothari, S.C., Shivarudraiah, P., Venkataramaiah, S.B., Gavara, S., Arumugam, S.N., Soni, M.G., 2014. Toxicologic evaluation of *Dichrostachys glomerata* extract: Subchronic study in rats and genotoxicity tests. *Food Chemical Toxicology* 69: 120-131
- Moran, D.L., Marone, P.A., Bauter, M.R., Soni, M.G., 2013. Safety assessment of Apoaequorin, a protein preparation: Subchronic toxicity study in rats. *Food Chemical Toxicology* 57: 1-10.
- Kothari, S.C., Shivarudraiah, P., Venkataramaiah, S.B., Gavara, S., **Soni, M.G.**, 2012. Lack of toxicity of *Irvingia gabonensis* extract (IGOB131): Subchronic toxicity in rats and genotoxicity studies. Food and Chemical Toxicology 50: 1468-1479.
- Chen, S.N., Nan, F.H., Chen, S., Wu, J.F., Chung, C.C., **Soni, M.G.**, 2011. Safety assessment of mushroom β-glucan: Subchronic toxicity in rodents and mutagenicity studies. *Food Chemical Toxicology* 49/11: 2890-2898.
- Kothari, S.C., Shivarudraiah, P., Venkataramaiah, S.B., Koppolu, K.P., Gavara, S., Jairam, R., Krishna, S., Chandrappa, R.K., **Soni, M.G.,** 2011. Safety assessment of

Cissus quadrangularis extract (CQR-300): Subchronic toxicity and mutagenicity studies. *Food Chemical Toxicology* 49: 3343-3357.

- Ravikrishnan, R., Rusia, S., Ilamurugan, G., Salunkhe, U., Deshpande, J., Shankaranarayana, J., Shankaranarayana, M.L., **Soni, M.G.**, 2011. Safety assessment of lutein and zeaxanthin (Lutemax[™] 2020): Subchronic toxicity and mutagenicity studies. *Food Chemical Toxicology* 49/11: 2841-2848.
- Dadhaniya, P., Patel, C., Muchhara, J., Bhadja, N., Mathuria, N., Vachhani, K., Soni,
 M.G., 2011. Safety assessment of a solid lipid curcumin particle preparation: Acute and subchronic toxicity studies. *Food Chemical Toxicology* 49/8: 1834-1842.
- Soni, M.G., Thurmond, T.S., Miller, E.M. III, Spriggs, T., Bendich, A., Omaye, S.T., 2010. Safety of Vitamins and Minerals: Controversies and Perspective. *Toxicological Sciences* 118/2: 348-355.
- Francois, I.E.J.A., Lescroart, O., Veraverbeke, W., Kubaszky, R., Hargitai, J., Esdaile, D.J., Beres, E., Soni, M.G., Cockburn, A., Broekaert, W.F., (2010) Safety assessment of a Wheat Bran Extract, containing arabinoxylan-oligosaccharides: Mutagenicity, clastogenicity and 90-day rat feeding studies. *International Journal of Toxicology* 29/5: 479-495.
- Hillman, J.D., McDonell, E., Hillman, C.H., Zahradnik, R.T. and **Soni, M.G.** 2009. Safety Assessment of ProBiora3[™], a Probiotic Mouthwash: Subchronic Toxicity Study in Rats. *International Journal of Toxicology* 28/5: 357-367.
- Morita, O. and **Soni, M.G.**, 2009. Safety assessment of diacylglycerol oil as an edible oil: A review of the published literature. *Food and Chemical Toxicology* 47: 9-21.
- Stewart, J.S., Lignell, A., Pettersson, A., Elfving, E., **Soni, M.G.,** 2008. Safety assessment of astaxanthin rich microalgae biomass: Acute and subchronic toxicity studies in rats. *Food and Chemical Toxicology* 46/9: 3030-3036.
- Patel, C., Hingorani, L. and **Soni, M.G.,** 2008. Safety assessment of pomegranate fruit extract: Acute and subchronic toxicity studies. *Food and Chemical Toxicology* 46/8: 2728-2735.
- Hayamizu, K., Tomi, H., Kaneko, I., Shen, M., **Soni, M.G.** and Yoshino, G., 2008. Effects of *Gacinia cambogia* extract (hydroxycitric acid) on serum sex hormones in overweight subjects: A double-blind, randomized, placebo-controlled trial. *Fitopteria* 79: 255-261.

- **Soni, M.G.,** Burdock, G.A., Christian, M.S., Bitler, C.M. and Crea, R. 2006. Safety Assessment of Aqueous Olive Pulp Extract as an Antioxidant or Antimicrobial Agent in Foods. *Food and Chemical Toxicology* 44/7: 903-915.
- Burdock, G.A., **Soni, M.G.**, Bagchi, M. and Bagchi, D., 2005. *Garcinia cambogia* toxicity is misleading. *Food and Chemical Toxicology* 43/11: 1683-1684.
- **Soni, M.G.,** Carabin, I.G. and Burdock, G.A., 2005. Safety Assessment of Esters of *p*-Hydroxybenzoic acid (Parabens). *Food and Chemical Toxicology* 43/7: 985-1015.
- **Soni, M.G.,** Carabin, I.G., Griffiths, J.C. and Burdock, G.A., 2004. β-Nitropropionic Acid in the Diet: Toxicity Aspects. *Reviews in Food and Nutrition* 127-170.
- **Soni, M.G.**, Burdock, G.A., Preuss, H.G., Stohs, S.J., Ohia S.E., Bagchi, D. Safety assessment of (-)-hydroxycitric acid and Super CitriMax[®], a novel calcium/potassium salt. *Food and Chemical Toxicology* 42/9 (2004) 1513-1529.
- Soni, M.G., Carabin, I.G., Griffiths, J.C. and Burdock, G.A. Safety of Ephedra: Lessons Learned. *Toxicology Letters* 150/1 (2004) 97-110.
- Soni, M.G. The Ephedra Controversy. *Nutritional Outlook* (March 2003) 32-33.
- Anand, S.S., Soni M.G., Vaidya, V.S., Murthy, S.N., Mumtaz, M.M. and Mehendale, H. M. Extent & Timeliness of Tissue Repair Determines the Dose-Related hepatotoxicity of Chloroform. *International Journal of Toxicology* 22/1 (2003) 25-33.
- Soni, M.G., Burdock, G. A., Taylor, S. L. and Greenberg, N. A. Evaluation of the health aspects of methyl paraben: a review of the published literature. *Food and Chemical Toxicology* **40** (2002) 1335-1373.
- Burdock, G. A., Carabin, I. G. and **Soni, M. G**. Safety Assessment of β-nitropropionic acid: A monograph in support of an acceptable daily intake in humans. *Food Chemistry* 75/1 (2002) 1-27.
- Mehendale, H.M., **Soni, M.G.,** Vaidya, V.S., Murthy, S.N. and Mumtaz, M.M. Extent & Timeliness of Tissue Repair Determines the Dose-Related hepatotoxicity of Chloroform. *International Journal of Toxicology* 21/6 (2001) 25-33.

- **Soni, M.G.**, Burdock, G. A., Taylor, S. L. and Greenberg, N. A. Evaluation of the health aspects of methyl paraben: a review of the published literature. *Food and Chemical Toxicology* 40 (2002) 1335-1373.
- Burdock, G. A., Carabin, I. G. and **Soni, M. G**. Safety Assessment of β-nitropropionic acid: A monograph in support of an acceptable daily intake in humans. *Food Chemistry* 75/1 (2002) 1-27.
- Burdock, G. A., **Soni, M. G.** and Carabin, I. G. Evaluation of health aspect of kojic acid in food. *Regulatory Toxicology and Pharmacology* **33/1** (2001) 80-101.
- **Soni M. G.,** Burdock, G. A., Taylor, S. L. and Greenburg, N. A. Safety Assessment of Propyl Paraben. *Food and Chemical Toxicology* 39 (2001) 513-532.
- Soni, M. G., White, S. A., Flamm, G. and Burdock, G. A. Safety Evaluation of Aluminum/Aluminum lakes. *Regulatory Toxicology and Pharmacology* 33/1 (2001) 66-79.
- **Soni M. G.** Kimura H. and Burdock G. A. Chronic studies on Diacylglycerol oil in rats. *Food and Chemical Toxicology* 39/4 (2001) 91-103
- Wang, T., Fontenot, R. D., **Soni, M. G.,** Bucci, T. J. and Mehendale, H. M. Enhanced hepatotoxicity and toxic outcome of thioacetamide in diabetes. *Toxicology and Applied Pharmacology* 166 (2000) 92-100.
- Soni, M. G., Ramaiah, S.K. Mumtaz, M. M., Clewell, H. and Mehendale, H. M. Toxicantinflected injury and stimulated tissue repair are opposing toxicodynamic forces in predictive toxicology. *Regulatory Toxicology and Pharmacology* 29 (1999) 165-174.
- Soni, M.G., Polasa, K. and Krishnaswamy, K. Alterations in rat tissue glutathione-Stransferase and its isozyme (Class Mu) during onion feeding. *Indian Journal of Pharmacology* 31 (1999) 239-240.
- Soni M. G. and Mehendale H. M. Role of tissue repair in toxicological interactions among hepatotoxic organics. *Environmental Health Perspectives* 106 Suppl. 6 (1998) 1301-1307.

- **Soni M. G.**, Mukundan M. A. and Krishnaswamy, K. Glutathione S-transferase (GST Mu) deficiency and DNA adducts in lymphocytes of smokers. *Toxicology* 126 (1998) 155-162.
- Ramaiah S. K., **Soni M. G.**, Warbritton, A., Bucci T. J. and Mehendale H. M. Diet restriction abolishes delay in tissue repair induced by lethal dose of thioacetamide: Mechanism for survival. *Toxicological Sciences* 45 (1998) 233-241.
- Soni M. G., Mangipudy, R. S., Mumtaz, M. M. and Mehendale H. M. Tissue repair response as a function of dose during trichloroethylene hepatotoxicity. *Toxicological Sciences* 42 (1998) 158-162.
- Ramaiah S. K., Soni M. G., Bucci T. J. and Mehendale H. M. Diet restriction enhances compensatory liver tissue repair and survival following administration of lethal dose of thioacetamide. *Toxicology and Applied Pharmacology* 150 (1998) 12-21. SOT Board of Publications Best Paper Award.
- Harper C. M., Soni M. G., Mehendale H. M. and Cuchens M. A. Pristane induced effects on cytochrome P-450 IA, ornithine decarboxylase and putrescine in rats. *Cancer Letters* 95 (1995) 11-21.
- **Soni M. G.,** Prasana-Krishna T. and Krishnaswamy K. Human leukocytes glutathione Stransferase isozyme (class Mu) and susceptibility to smoking related cancers. *Journal* of *Toxicology and Environmental Health* 46 (1995) 1-8.
- Soni M. G. and Mehendale H. M. Adenosine triphosphate protection of chlordeconeamplified CCl4 hepatotoxicity and lethality. *Journal of Hepatology* 20 (1994) 267-274.
- **Soni M. G.** and Mehendale H. M. Evidence for hepatic failure in the interactive toxicity of chlordecone and carbon tetrachloride. *Fundamental and Applied Toxicology* 21 (1993) 442-450.
- **Soni M. G**. and Mehendale H. M. Role of energy status in chlordecone amplification of CCl₄ toxicity. *Indian Journal of Environmental Toxicology* 1 (1991) 69-86.
- Faroon O. M., Henry R. W., **Soni M. G.** and Mehendale H. M. Potentiation of BrCCl₃ hepatotoxicity by chlordecone: Biochemical and ultrastructural study. *Toxicology and Applied Pharmacology* 110 (1991) 185-197.

- **Soni M. G.** and Mehendale H. M. Hepatic regeneration as a possible mechanism for the hepatoprotective action of (+)-cyanidanol. *International Journal of Biochemistry* 23 (1991) 1369-1373.
- **Soni M. G.** and Mehendale H. M. Protection of chlordecone-amplified carbon tetrachloride toxicity by cyanidanol: Regeneration studies. *Toxicology and Applied Pharmacology* 108 (1991) 46-57.
- **Soni M. G.** and Mehendale H. M. Protection of chlordecone-amplified carbon tetrachloride toxicity by cyanidanol: Biochemical and histological studies. *Toxicology and Applied Pharmacology* 108 (1991) 58-66.
- **Soni M. G.,** Nomiyama H. and Nomiyama K. Chronic inhalation effect of tetrachloroethylene on hepatic and renal microsomal electron transport components and delta aminolevulinate dehydratase in rats. *Toxicology Letters* 54 (1991) 207-213.
- **Soni M. G.,** Nomiyama H. and Nomiyama K. Chronic inhalation effects of trichloroethylene on microsomal mixed function oxidase system in rats. Toxicology and Environmental Chemistry 29 (1990) 121-126.
- **Soni M. G.,** Kachole M. S. and Pawar S. S. Alterations in drug metabolizing enzymes and lipid peroxidation in different rat tissues by fluoride. *Toxicology Letters* 21 (1984) 163-172.
- **Soni M. G.** and Pawar S. S. Effect of sodium fluoride on hepatic microsomal mixed function oxidase in new born and adult male rats. *Toxicology Letters* 21 (1984) 163-166.
- **Soni M. G.,** Kachole M. S. and Pawar S. S. Changes in hepatic and renal microsomal mixed function oxidase system in adult male rats during administration of sodium fluoride. *Fluoride* 15 (1982) 132-136.
- Soni M. G., Govindwar S. P., Desai B. J., Gawai K. R., Zubairy Y. K. and Kachole M. Inhibition of hepatic microsomal mixed function oxidase system during acute cadmium toxicity in rats, mice, guinea pigs and rabbits. *Indian J. Exp. Biol.* 20 (1982) 600-602.
- Soni M. G., Kachole M. S. and Pawar S. S. Acute effect of cadmium on hepatic drug metabolizing enzymes in adult rats and role of cystine treatment. *Indian J. Exp. Biol.* 19 (1981) 1169-1171.

REVIEWS, BOOK CHAPTERS & OTHERS:

- Soni, M.G., Shelke, K., Amin, R. and Talati, A., Lessons from the Use of Ephedra Products as Dietary Supplements (update). In *Obesity: Epidemiology, Pathophysiology, and Prevention* (Eds: Bagchi, D. and Preuss, H.G.). Second Edition. Taylor & Francis Group, CRC Press, Boca Raton, FL. 2013 pp 691-702.
- Soni, M.G., Shelke, K. and Amin, R. Lessons from the Use of Ephedra Products as Dietary Supplements. In *Obesity: Epidemiology, Pathophysiology, and Prevention* (Eds: Bagchi and Preuss). CRC Press, Boca Raton, FL. 2007 pp 495-506
- Soni, M.G. US Teaching Methods. Nature 392 (1998) 542.
- Soni M. G. Entries on Baygon, BCNU, Belladona alkaloids, Benadryl, Benz(a)anthracene, Benzene hexachloride and Dichloroethanes. In *Encyclopedia of Toxicology* (Ed. Phillip Wexler) Academic Press, USA, 1998. Revision: 2005.
- Soni M. G. Comments on "Weight of Evidence Method for Mixtures" in the report from the mixture expert panel review meeting. Submitted to *ATSDR, Center for Disease Control, US Department of Health and Human Services*. Prepared by Eastern Research Group, Inc. June 24, 1997.
- Soni M. G. Does switching to smokeless tobacco help smokers? *PTI Science Service* 16 (1997) 7-9.
- Soni M. G. Antioxidants: Helpful or Harmful? Current Science 68 (1995) 783-784.
- Soni M. G. and Mehendale H. M. Role of energy status in chlordecone amplification of CCl₄ toxicity. *Indian J. Environ. Toxicol.* **1** (1991) 69-86.
- Faroon O. M., Henry R. W., Soni M. G. and Mehendale H. M. Potentiation of bromotrichloromethane hepatotoxicity in male rats exposed to 10 ppm dietary chlordecone: Electron microscopy and biochemical study. In Proc. of XIIth International Congress for Electron Microscopy, San Francisco Press, Vol. 3, 1990, 284-285.

- Nomiyama K., Nomiyama H., Kamal A. M., Yamazaki O., Ishimaru Y., **Soni M. G.** and Ohshiro Y. Factors Aggravating cadmium health effects in old animals. *In Trace Elements in Clinical Medicine*. Ed. Tomita H., Springer-Verlag, 1989, pp. 493-500.
- Zubairy Y., Govindwar S., Soni M., Kachole M. and Pawar S. Energy regulation and drug metabolism in hepatic and intestinal microsomes of rat and chick. In *Cytochrome P-*450 Biochemistry, Biophysics and Environmental Implications, Ed. E. Hietanen, Elsevior Bio-Medical Press 1982 pp. 675-679.

PRESENTATIONS & ABSTRACTS:

- **Soni M.G.**, Bolger P.M. (2013). Health Risks of Sodium (Salt) Intake: Too Much or Too Little? *The Toxicologist*. Abstract No.: 843.
- **Soni M.G.**, Mahadevan, B. (2012). Chemical standardization of botanical medicine for safe and effective use as therapeutic agents. *The Toxicologist* 126/1: 589. Abstract No.: 2732.
- **Soni M.G.** (2010) Stevia derived sweeteners: Safety, regulatory and technical considerations. Invited speaker at- Stevia Global Summit, New Delhi India. July 11, 2010.
- **Soni M.G.,** Thurmond, T.S., Miller, E.R., Bendich, A. and Omaye, S.T. (2010) Safety of vitamins and minerals: Controversies and perspectives. *The Toxicologist.* Page 130. Abstract No.: 609.
- Rumbeiha, W. and **Soni M.G.** (2010) Lessons learned from melamine poisoning of infant formulas. *The Toxicologist.* Page 69. Abstract No.: 319.
- **Soni, M.G.** and Thompson, C.D. (2009) Safety of high intensity sweeteners: Bittersweet controversy. *The Toxicologist.* Page 226. Abstract No.: 1255.
- Mahadevan, B. and **Soni, M.G.** (2009) A quarter of a century (1984-2009) since the Bhopal disaster: Lesson learned. *The Toxicologist.* Page 76. Abstract No.: 328.
- **Soni, M.G.** and Nohynek, G. (2008) To dye or not to dye: Safety of oxidative hair dyes *The Toxicologist.* Page 134; Abstract No.: 658.

- Hayamizu, K., Tomi, H., Kaneko, I., Shen, M., Soni, M.G. and Yoshino, G. (2008) Effects of *Gacinia cambogia* extract (hydroxycitric acid) on serum sex hormones in overweight subjects: A double-blind, randomized, placebo-controlled trial. *The Toxicologist* Page 101. Abstract No.: 493.
- Soni M.G. (2007) Safety of *Garcinia cambogia* extract: Lessons learned. J. Clin. Biochem Nutr. 42 (Suppl.) 31 (S01-2).
- Bagchi, D., Deshmukh, N.S., Soni, M.G. and Bagchi, M. (2007) Safety of a Novel Calcium/Potassium Salt of (-)-Hydroxycitric Acid (Super CitriMax): I. Two-Generation Reproduction Toxicity Study. *Toxicol Lett* 172S:S190
- Bagchi, D., Deshmukh, N.S., Soni, M.G. and Bagchi, M. (2007) Safety of a Novel Calcium/Potassium Salt of (-)-Hydroxycitric Acid (Super CitriMax): II. Developmental Toxicity Study. *Toxicol Lett* 172S:S191
- **Soni, M.G.** and Bolger P.M. (2007) Safety of Dietary Supplements Used for Weight Reduction: Lessons Learned. *The Toxicologist* (2007) 447.
- **Soni, M.G.** and Nohynek, G. (2006) Potential Human Health Risk from Estrogenic Food and Consumer Product Additives: How Much is Real and How Much is Hype? *Toxicological Sciences* 90: 234.
- Soni, M.G. and Zacharewski, T. Role of Nutrigenomics in Safety Assessment of Functional Foods. *The Toxicologist* (2005) 7-8.
- **Soni, M.G.**, Burdock, G. A., Taylor, S. L. and Greenberg, N. A. Evaluation of the health aspects of methyl paraben in support of an acceptable daily intake in humans. *The Toxicological Sciences* **66** (2002) 188.
- Murthy, S. N., Vaidya, V. S., Soni, M. G., Mumtaz, M. M., Bucci, T. J. and Mehendale, H.
 M. Binary mixture of thioacetamide and CHCl₃ elicits additive responses in male Sprague- Dawley rats. *The Toxicologist*. 60: 389-390, 2001.
- Soni, M. G., Mumtaz, M. M., Clewell, H., Vaidya, V. S., and Mehendale, H. M. Doserelated changes in the pharmacokinetics of trichloroethylene in rat. *Toxicological Sciences* 54 (2000) 420.

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From:	Marisa Rihner
To:	Zhang, Janet
Subject:	[EXTERNAL] RE: GRN 001073
Date:	Thursday, February 9, 2023 4:18:45 PM
Attachments:	image008.png
	image009.png

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Dear Janet,

As requested, please see the following updated statement that is submitted on behalf of the Notifier, AgriFiber Solutions, LLC.

Corn bran arabinoxylan (SFC) does not contain any of the nine allergens that are considered to be major food allergens under the United States Food Allergen Labelling and Consumer Protection Act of 2004 (FALCPA) and the Food Allergy Safety, Treatment, Education, and Research (FASTER) Act of 2021.

Thank you and feel free to contact me with any questions.

Sincerely,

Marisa O. Rihner, RQAP-GLP Senior Managing Consultant, QA and Regulatory Affairs **SafeBridge® Regulatory & Life Sciences Group** 154 Hansen Road, Suite 201 Charlottesville, VA 22911 USA Tel: 434.977.5957 **x4723** | Fax: 434.977.1856 <u>marisa.rihner@safebridge.com</u> | <u>safebridge.com</u>





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From: Zhang, Janet <Janet.Zhang@fda.hhs.gov>
Sent: Wednesday, February 08, 2023 11:27 AM
To: Craig Llewellyn <Craig.Llewellyn@safebridge.com>
Subject: GRN 001073

Good morning Craig,

We have one additional question regarding GRN 001073.

On page 35, AgriFiber states that Corn bran arabinoxylan (SFC) does not contain any of the eight allergens that are considered to be major food allergens under the United States Food Allergen Labelling and Consumer Protection Act of 2004 (FALCPA). Please note that sesame is joining the list of major food allergens defined in the law as the result of the Food Allergy Safety, Treatment, Education, and Research (FASTER) Act and the law became effective on January 1, 2023. Please provide an updated statement to clarify if SFC does not contain sesame as other eight allergens.

Thanks, Janet

Jianrong (Janet) Zhang, Ph.D. FDA/OFVM/CFSAN/OFAS/DST College Park, MD 20740 Phone: 240-402-1327 janet.zhang@fda.hhs.gov





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March 21, 2023

Jianrong (Janet) Zhang, Ph.D. U.S. Food and Drug Administration Center for Food Safety & Applied Nutrition 5001 Campus Drive College Park, MD 20740

Re: Updated Contact Information for GRN 1073

Dear Dr. Zhang,

Please note the updated contact information below for GRN 1073. Please direct all questions and communications regarding GRN 1073 to the following individuals.

Marisa O. Rihner Senior Managing Consultant SafeBridge® Regulatory & Life Sciences Group 154 Hansen Road, Suite 201 Charlottesville, VA 22911, USA Tel: 434.977.5957 x4723 marisa.rihner@safebridge.com

and

Jonathan Kahn Chief Executive Officer AgriFiber Inc. 1011 Campus Drive Mundelein, IL 60060, USA Tel: 224.443.8147 Cel: 312.560.7444 jkahn@agrfbr.com

Thank you and feel free to contact me with any questions.

Sincerely,

Marisa O. Rihner, RQAP-GLP Senior Managing Consultant

154 Hansen Road, Suite 201, Charlottesville, VA 22911, USA

November 14, 2022

 In Table 1 on page 5, AgriFiber states that the specification limits for both yeast and mold is "< 200 CFU/g", which is much higher than the batch analysis results as "<10 CFU/g" in Table 2 on page 9. These specifications are also much higher than the ones proposed in the pre-submitted GRN998 (<10 CFU/g). Please provide a justification for the proposed higher specification limits for yeast and mold in GRN 001073. We note that the specification limits should reflect the results of batch analyses and be as low as possible.

Notifier Response:

The specification limits for yeast and molds were previously increased to < 200 CFU/g based on historical data the and in consideration of the raw material (corn bran) specification limits for these parameters. With recent improvements to the manufacturing process of SFC, paired with additional and more recent data trends, the Notifier proposes a specification limit of < 50 CFU/g for yeast and mold. A revised Table 1 is provided below (see Response to Question 2) reflecting this update.

2. In Table 2 on page 6, AgriFiber provides the acceptable target limits for the heavy metals (lead, arsenic, and cadmium) and states that the heavy metals are monitored periodically but they are not included in the specifications (footnote to Table 2). We note that typically specifications for ingredients derived from plant sources include limits for heavy metals. Please include the limits for heavy metals (including mercury) in the specifications and provide a revised Table 1 (page 5). In addition, please provide the results for mercury from three non-consecutive batch analyses.

Notifier Response:

A revised Table 1 is provided below including specifications for heavy metals (lead, arsenic, cadmium, and mercury). A revised Table 2 is also provided below including the results for mercury from three non-consecutive batch analyses. These results for mercury were included in Exhibit I-B of GRN 1073 (Deibel Laboratories COAs dated June 25, 2020).

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Table 1. <u>Revised</u> Specifications for Corn Bran Arabinoxylan (SFC)

Analytical Parameter	Units	Acceptable Method of Analysis		
		Target/Range		
Appearance	N/A	Tan – Brown powder	Organoleptic	
Odor	N/A	Grainy – Neutral	Organoleptic	
Taste	N/A	Grainy – Slightly sweet	Organoleptic	
Moisture	%	< 9	Ohaus MB 45, 1 min	
Ash	%	< 6	Mod 923.03/942.05, Dried Basis	
Total dietary fiber	%	74-90	AOAC 2009.01 AOAC 2011.25	
(arabinoxylan)				
Aerobic Plate Count	CFU/g	< 6,000	FDA BAM	
Yeast	CFU/g	< 50	FDA BAM	
Mold	CFU/g	< 50	FDA BAM	
Escherichia coli	CFU/g	< 10	FDA BAM	
Coliform	CFU/g	< 10	AOAC 991.14	
Salmonella	/25 g	Negative	FDA BAM	
Lead	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)	
Arsenic (Total)	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)	
Cadmium	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)	
Mercury	ppm	< 0.10	AOAC 985.01 Modified (ICP-MS)	

Association of Official Agricultural Chemists (AOAC); Colony-forming unit (CFU); Food and Drug Administration Bacteriological Analytical Method (FDA BAM); gram (g); **ICP-MS (Inductively Coupled Plasma Mass Spectrometry)**; not applicable (N/A)

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Parameter	Units	Specification /	Sample ID:	Sample ID:	Sample ID:	Method
		Acceptable	SFC.948879.01	SFC.948179.01	SFC.948779.01	
		Target*	(previous ID:	(previous ID:	(previous ID:	
			BFG.948879.01	BFG.948179.01	BFG.948779.01	
			or CBFG2-	or CBFG2-	or CBFG2-	
A	N1/A	Tau Duanu	948879.01)	948179.01)	948779.01)	Oursenslautie
Appearance ¹	N/A	Tan – Brown	Light brown	Light brown	Light brown	Organoleptic
Odar ¹		powder	powder	powder	powder	Organalantia
Odor ¹	N/A	Grainy – Neutral	Neutral	Neutral	Neutral	Organoleptic
Taste ¹	N/A	Grainy – Slightly sweet	Slightly sweet	Slightly sweet	Slightly sweet	Organoleptic
Moisture ¹	%	< 9	8.60	4.41	4.81	Ohaus MB 45, 1
A - I- 2	0/		4 74	F 20	4.50	min
Ash ²	%	< 6	4.71	5.29	4.58	Mod
						923.03/942.05, Dried Basis
Total distant	%	74-90	79.56	78.53	81.61	AOAC 2009.01
Total dietary fiber	70	74-90	79.50	78.55	81.01	AOAC 2009.01 AOAC 2011.25
(arabinoxylan) ²						AUAC 2011.25
Aerobic Plate	CFU/g	< 6,000	5,100	4,800	1,200	FDA BAM
Count ¹	CI 0/8	< 0,000	5,100	4,000	1,200	
Yeast ¹	CFU/g	< 50	< 10	< 10	< 10	FDA BAM
Mold ¹	CFU/g		< 10	< 10	< 10	FDA BAM
Escherichia coli ¹	CFU/g		< 10	< 10	< 10	FDA BAM
Coliform ¹	CFU/g		< 10	< 10	< 10	AOAC 991.14
Salmonella ¹	/25 g	Negative	Negative	Negative	Negative	FDA BAM
Clostridium	CFU/g	-	< 10	< 10	< 10	FDA BAM 8 th
perfringens ³						Edition Chap 16
Aflatoxin ELISA ³	ppb	< 5.0*	< 5.0	< 5.0	< 5.0	AOAC RI-05091
Lead ³	ppm	< 0.10	< 0.10	< 0.10	< 0.10	AOAC 985.01
						Modified (ICP-MS)
Arsenic (Total) ³	ppm	< 0.10	< 0.10	< 0.10	< 0.10	AOAC 985.01
	-					Modified (ICP-MS)
Cadmium ³	ppm	< 0.10	< 0.10	< 0.10	< 0.10	AOAC 985.01
						Modified (ICP-MS)
Mercury ³	ppm	< 0.10	< 0.10	< 0.10	< 0.10	AOAC 985.01
						Modified (ICP-MS)

Table 2. Revised Analytical Results on Three Nonconsecutive Lots of Corn Bran Arabinoxylan (SFC)

Note: AgriFibers' Corn Bran Arabinoxylan (SFC) was previously identified internally as "BFG" which accounts for the minor differences in batch identification on the COAs.

¹Results from AgriFiber's certificates of analysis (COAs) dated June 25, 2020.

² Results from Eurofins' COAs dated November 09, 2020.

³ Results from Deibel Laboratories COAs dated June 25, 2020.

* Acceptable Target for parameters not in SFC Specifications but monitored periodically and/or monitored in the raw material.

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 In Table 5 on pages 15-17, the notifier lists the proposed food categories with corresponding use levels (%). We note that the use levels for several food categories are provided as broad ranges. Please provide the maximum use level (%) for each of the foods under the large food categories of "Baked goods and baking mixes", "Grain products and pastas" and "Ready-to-eat cereals".

Notifier Response:

The maximum use level (%) for each of the foods under the large food categories of "Baked goods and baking mixes", "Grain products and pastas" and "Ready-to-eat cereals" are provided in the table below.

Food use type	Description of Foods Selected for Analysis	SFC Maximun Use Level in Finished Product ^a
Baked goods and baking mixes	Yeast breads, rolls and buns, tortillas, bagels, English muffins, biscuits, muffins, quick breads, cakes and pies, cookies and brownies, pancakes, waffles, French toast, doughnuts, sweet rolls, pastries	3.8 g/serving (3 – 54.3%) ^b
	Cakes, heavyweight; pies, cobblers, fruit crisps, turnovers, other pastries	3%
	Bagels, toaster pastries, muffins; French toast, crepes, pancakes	3.5%
	Waffles	4.5%
	Cakes, mediumweight	4.8%
	Biscuits, croissants, tortillas, soft bread sticks, soft pretzels, corn bread, hush puppies, scones, crumpets, English muffins; cakes, lightweight; coffee cakes, crumb cakes, doughnuts, Danish, sweet rolls, sweet quick type breads; pizza crust	6.9%
	Breads (excluding sweet quick type), rolls	7.6%
	Brownies	9.5%
	Cookies; taco shells, hard	12.7%
	Croutons	54.3%
Grain products and pastas	Cereal/nutrition bars, all pasta and noodles (cooked)	3.8 g/serving (2.7 – 9.5%) ^b
	Pasta	2.7%
	Bars	9.5%

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Food use type	Description of Foods Selected for Analysis	SFC Maximum Use Level in Finished Product ^a
Ready-to-eat (RTE)	All RTE cereals such as puffed rice, General Mills Cheerios,	3.8 g/serving
cereals	Quaker Cap'n Crunch, Kellogg's All-Bran, General Mills	(6.3 – 25.3%) ^b
	Fiber One, Post Shredded Wheat	
	Breakfast cereals, ready-to-eat, weighing 43 g or more	6.3%
	per cup; biscuit types	
	Breakfast cereals, ready-to-eat, weighing 20 g or more	9.5%
	but less than 43 g per cup; high fiber cereals containing	
	28 g or more of fiber per 100 g	
	Breakfast cereals, ready-to-eat, weighing less than 20 g	25.3%
	per cup, e.g., plain puffed cereal grains	

Abbreviations: SFC soluble fiber corn; g gram; RTE ready-to-eat

^a Use level corresponds to the finished product (i.e., food as consumed).

^b Based on a food serving which corresponds to the gram weight, cup weight, or milliliter (mL) volume as specified by the Reference Amounts Customarily Consumed (RACCs) as cited in FR Vol 81, No. 103, Friday, May 27, 2016, pp 34000-47. Available at: https://www.govinfo.gov/content/pkg/FR-2016-05-27/pdf/2016-11865.pdf. Serving size as a volume measure (e.g., cup, mL, tbsp) assumed that 1 mL=1g.

4. On page 19, AgriFiber states that "The FDA Recommended Daily Value (RDV) for dietary fiber is 28 g/day (FDA, 2020) and the Adequate Intake (AI) levels for fiber recommended by the Institute of Medicine (IOM) are 25 g per day for adult women and 38 g per day for adult men (IOM, 2002/2005)." Please note that under section 21 CFR 101.9 (c) (9), the Daily Reference Value (DRV) for dietary fiber is 28g/day. It is not Recommended Daily Value (RDV). Please clarify.

Notifier Response:

The statement on page 19 is corrected as follows:

"The FDA Recommended Daily Value (RDV) Daily Reference Value (DRV) for dietary fiber is 28 g/day (FDA, 2020; **21 CFR 101.9(c)(9)**) and the Adequate Intake (AI) levels for fiber recommended by the Institute of Medicine (IOM) are 25 g per day for adult women and 38 g per day for adult men (IOM, 2002/2005)."

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5. On page 28, AgriFiber states that "Wheat bran derived AXOS (GRN 343), corn cob derived XOS (GRN 458), and sugarcane derived XOS (GRN 816) are also all commercially available and have affirmed GRAS status (FDA Response Letters dated 2010, 2013b, and 2019, respectively)." Please note that the GRAS notification program provides a voluntary mechanism whereby a person may inform FDA of a determination that the use of a substance is GRAS, rather than petition FDA to affirm that the use of a substance is GRAS. Those three mentioned GRAS notices received a no questions letter from FDA and, as such, the substances do not have affirmed GRAS status for their respective intended uses. Please clarify.

Notifier Response:

The statement on page 28 is corrected as follows:

"Wheat bran derived AXOS (GRN 343), corn cob derived XOS (GRN 458), and sugarcane derived XOS (GRN 816) are also all commercially available and have affirmed GRAS status were the subject of GRAS conclusions notified to US FDA (FDA Response No Questions Letters dated 2010, 2013b, and 2019, respectively)."

6. On page 31, AgriFiber discusses a clinical study in which corn bran arabinoxylan was used as the dietary intervention.

a. Although there are two published papers cited for this clinical data and information (i.e., Deehan et al., 2022 and Nguyen et al., 2020), it appears that the data is derived from a single volunteer cohort. Please clarify if these publications resulted from a single study cohort (i.e., 31 participants in total) or if there were separate volunteer cohorts for each publication (i.e., 31 participants for each study).

Notifier Response:

The cited publications (i.e., Deehan et al., 2022 and Nguyen et al., 2020) resulted from a single study cohort (i.e., 31 participants in total).

b. The doses of corn bran arabinoxylan in the clinical study are stated as 25 g/d for females and 35 g/d for males. This could imply differences in tolerability for the corn bran arabinoxylan ingredient between females and males. Given that AgriFiber's dietary exposure for adults 19 years and older (i.e., 35.7 g/p/d at the 90th percentile) is significantly higher than what was consumed by female participants in the clinical study, please discuss if AgriFiber expects there to be differences in tolerability for females and males after consumption of the notified ingredient.

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Notifier Response:

The doses of corn bran arabinoxylan utilized in the clinical study (25 g/d for females and 35 g/d for males) were selected for consistency with the Adequate Intake (AI) levels for dietary fiber recommended by the Institute of Medicine (IOM), i.e., 25 g/d for adult women and 38 g/d for adult men (IOM, 2002/2005). As described in the IOM 2002/2005 report, recommendations for fiber intake are based on a certain amount of total fiber as a function of energy intake; thus, the AI for women is lower due to a lower total daily calorie intake and not due to differences in tolerability of dietary fiber. Likewise, based on the conserved gastrointestinal handling of dietary fiber, AgriFiber does not expect there to be differences in tolerability for females and males after consumption of the notified ingredient.

7. On page 31, AgriFiber discusses the clinical study by François et al., 2014 in which preadolescent children (8-12 years) safely consumed wheat bran extract containing arabinoxylan oligosaccharides at 5 g/p/d. Given that AgriFiber's dietary exposure for children is significantly higher than 5 g/p/d (i.e., 27.2 g/p/d (1-5 years) and 34.8 g/p/d (6-12 years) at the 90th percentile), an additional discussion is needed to support the conclusion that corn bran arabinoxylan is GRAS for its intended use. Specifically, please provide a narrative that discusses why corn bran arabinoxylan is safe and tolerable for children at AgriFiber's estimated dietary exposures provided in Table 6.

Notifier Response:

The Adequate Intake (AI) levels for dietary fiber recommended by the Institute of Medicine (IOM) for children and adolescents are 19 g/day (1-3 years), 25 g/d (4-8 years), 26-31 g/day (9-13 years), and 26-38 g/day (14-18 years) (IOM, 2002/2005). These recommendations for fiber intake are based on a certain amount of total fiber as a function of energy intake, and are extrapolated from adult data. For example, the median energy intake for 1- to 3-year-old children is 1372 kcal/d and the recommendation for total fiber is 19 g/d (IOM, 2002/2005). Because a high intake of Dietary Fiber will not produce significant deleterious effects in healthy individuals, a Tolerable Upper Intake Level (UL) is not set for Dietary Fiber in children (IOM, 2002/2005).

Given the conserved gastrointestinal handling of dietary fiber and considering that the conservative dietary exposure estimates for SFC among children (i.e., 27.2 g/p/d (1-5 years) and 34.8 g/p/d (6-12 years) at the 90th percentile) are within/consistent with these AIs for dietary fiber, and the safety/tolerability of SFC in children is expected to be the same as that of dietary fiber in children, and of SFC in adults (Deehan et al., 2022 and Nguyen et al., 2020), SFC (corn bran arabinoxylan) is concluded to be safe and tolerable for children at AgriFiber's estimated dietary exposures.