



**FY22/23 Sample Collection and Analysis of
Retail¹ Dairy-Free Labeled Dark Chocolate Products² and Chocolate-Containing Products
for Milk Allergen**

(Table of Analytical Results and Follow-Up Actions)

Sample No.	Product Category	Analytical Result (ppm milk as NFDM) ³	Follow-Up Action
1	Chocolate Chips	*	-
2	Chocolate Chips	*	-
3	Chocolate Chips	*	-
4	Chocolate Chips	*	-
5	Chocolate Chips	*	-
6	Chocolate Chips	*	-
7	Chocolate Bar	*	-
8	Chocolate Bar	*	-
9	Chocolate Bar	*	-
10	Chocolate Bar	*	-
11	Baking Chocolate Powder	*	-
12	Baking Chocolate Powder	*	-

¹ The Pennsylvania Department of Agriculture and Michigan Department of Agriculture and Rural Development collected samples of retail products within their respective states and performed all analyses.

² The chocolate chips and chocolate bars listed in the table are dark chocolate products.

³ The quantities of milk detected and reported in this column represent the results of Morinaga Institute of Biological Science Casein Total Milk Allergen ELISA kit testing. The results from this analysis are reported as milk (as NFDM) after conversion by calculation from ppm protein from the original analysis. The asterisk (*) indicates that milk protein screen using a Neogen Veratox kit was below the kit limit of quantitation. Samples that screened positive with the Neogen Veratox kit were confirmed with the Morinaga Institute of Biological Science Casein Total Milk Allergen ELISA kit.

Sample No.	Product Category	Analytical Result (ppm milk as NFD ^M) ³	Follow-Up Action
13	Baking Chocolate Powder	*	-
14	Baking Chocolate Powder	*	-
15	Chocolate Syrup	*	-
16	Chocolate Syrup	*	-
17	Chocolate Sauce	*	-
18	Chocolate Bar	*	-
19	Chocolate Chip Cookie	*	-
20	Baking Chocolate Powder	*	-
21	Baking Chocolate Powder	*	-
22	Chocolate Frosting	*	-
23	Baking Chocolate Powder	*	-
24	Chocolate Syrup	*	-
25	Chocolate Syrup	*	-
26	Baking Chocolate Powder	*	-
27	Chocolate Syrup	*	-
28	Chocolate Syrup	*	-
29	Chocolate Chips	*	-
30	Chocolate Chips	*	-
31	Chocolate Chips	*	-
32	Chocolate Chips	*	-
33	Chocolate Chips	*	-
34	Baking Chocolate Powder	*	-
35	Baking Chocolate Powder	*	-
36	Baking Chocolate Powder	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFDM) ³	Follow-Up Action
37	Baking Chocolate Powder	*	-
38	Chocolate Chips	*	-
39	Chocolate Chips	*	-
40	Chocolate Syrup	*	-
41	Chocolate Syrup	*	-
42	Chocolate Syrup	*	-
43	Chocolate Syrup	*	-
44	Chocolate Sauce	*	-
45	Chocolate Bar	*	-
46	Chocolate Bar	*	-
47	Chocolate Bar	*	-
48	Chocolate Bar	*	-
49	Chocolate Bar	*	-
50	Chocolate Syrup	*	-
51	Chocolate Syrup	*	-
52	Chocolate Syrup	*	-
53	Chocolate Confection	*	-
54	Chocolate Confection	*	-
55	Chocolate Chip Cookie	*	-
56	Chocolate Chip Cookie	17 ppm	Met with firm (Firm A)
57	Chocolate Bar	*	-
58	Chocolate Bar	*	-
59	Chocolate Bar	*	-
60	Chocolate Bar	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFDM) ³	Follow-Up Action
61	Chocolate Bar	*	-
62	Chocolate Confection	*	-
63	Chocolate Chips	*	-
64	Hot Chocolate Mix	*	-
65	Hot Chocolate Mix	*	-
66	Hot Chocolate Mix	*	-
67	Hot Chocolate Mix	*	-
68	Hot Chocolate Mix	*	-
69	Baking Chocolate Powder	*	-
70	Chocolate Chips	*	-
71	Chocolate Chips	*	-
72	Chocolate Chips	*	-
73	Baking Chocolate Powder	*	-
74	Baking Chocolate Powder	*	-
75	Chocolate Bar	*	-
76	Baking Chocolate Powder	*	-
77	Chocolate Chips	*	-
78	Chocolate Chips	*	-
79	Chocolate Bar	*	-
80	Chocolate Bar	*	-
81	Chocolate Bar	*	-
82	Chocolate Bar	*	-
83	Chocolate Bar	*	-
84	Chocolate Syrup	*	-
85	Baking Chocolate Powder	*	-
86	Baking Chocolate Powder	*	-
87	Baking Chocolate Powder	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFD ^M) ³	Follow-Up Action
88	Chocolate Bar	*	-
89	Chocolate Bar	*	-
90	Chocolate Bar	*	-
91	Chocolate Bar	*	-
92	Chocolate Chips	*	-
93	Chocolate Bar	*	-
94	Chocolate Bar	*	-
95	Chocolate Bar	*	-
96	Chocolate Chips	*	-
97	Chocolate Bar	*	-
98	Chocolate Bar	*	-
99	Chocolate Chips	*	-
100	Chocolate Bar	*	-
101	Chocolate Bar	*	-
102	Chocolate Chips	*	-
103	Chocolate Bar	*	-
104	Chocolate Bar	*	-
105	Chocolate Chips	*	-
106	Chocolate Bar	*	-
107	Chocolate Bar	*	-
108	Chocolate Chips	*	-
109	Chocolate Chips	*	-
110	Chocolate Bar	*	-
111	Chocolate Bar	*	-
112	Chocolate Bar	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFD ^M) ³	Follow-Up Action ⁴
113	Chocolate Bar	*	-
114	Chocolate Chips	*	-
115	Chocolate Bar	*	-
116	Chocolate Chips	*	-
117	Chocolate Bar	*	-
118	Chocolate Bar	*	-
119	Chocolate Chips	*	-
120	Chocolate Chips	*	-
121	Chocolate Chips	*	-
122	Chocolate Bar	*	-
123	Chocolate Chips	*	-
124	Chocolate Bar	46 ppm	Met with firm (Firm B)
125	Chocolate Bar	16 ppm	Met with firm (Firm B)
126	Chocolate Bar	40 ppm	Met with firm (Firm B)
127	Chocolate Bar	43 ppm	Met with firm (Firm B)
128	Chocolate Bar	76 ppm	Met with firm (Firm B)
129	Chocolate Bar	1,083 ppm	Met with firm (Firm B)
130	Chocolate Bar	24 ppm	Met with firm (Firm B)
131	Chocolate Bar	21 ppm	Met with firm (Firm B)
132	Chocolate Chips	*	-
133	Chocolate Chips	*	-
134	Chocolate Chips	*	-
135	Chocolate Bar	*	-
136	Chocolate Bar	*	-
137	Chocolate Bar	*	-
138	Chocolate Bar	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFD ^M) ³	Follow-Up Action
139	Chocolate Chip Cookie	*	-
140	Chocolate Chips	*	-
141	Chocolate Bar	*	-
142	Chocolate Bar	*	-
143	Chocolate Bar	*	-
144	Chocolate Bar	*	-
145	Chocolate Chips	*	-
146	Chocolate Bar	*	-
147	Chocolate Chips	*	-
148	Chocolate Chips	*	-
149	Chocolate Chips	*	-
150	Chocolate Chips	*	-
151	Chocolate Bar	*	-
152	Chocolate Bar	*	-
153	Chocolate Bar	*	-
154	Chocolate Bar	*	-
155	Chocolate Bar	*	-
156	Chocolate Bar	*	-
157	Chocolate Chips	*	-
158	Chocolate Bar	*	-
159	Chocolate Confection	*	-
160	Chocolate Chips	*	-
161	Chocolate Chips	*	-
162	Chocolate Bar	*	-
163	Chocolate Chips	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFDM) ³	Follow-Up Action
164	Chocolate Chips	*	-
165	Chocolate Chips	*	-
166	Chocolate Bar	*	-
167	Chocolate Bar	*	-
168	Chocolate Chips	*	-
169	Chocolate Confection	*	-
170	Chocolate Bar	*	-
171	Chocolate Bar	*	-
172	Chocolate Bar	*	-
173	Chocolate Confection	*	-
174	Chocolate Bar	46 ppm	Met with firm (Firm C)
175	Chocolate Bar	38 ppm	Met with firm (Firm C)
176	Chocolate Bar	21 ppm	Met with firm (Firm C)
177	Chocolate Bar	51 ppm	Met with firm (Firm C)
178	Chocolate Chip Cookie	*	-
179	Chocolate Chip Cookie	*	-
180	Chocolate Confection	*	-
181	Chocolate Confection	*	-
182	Chocolate Cookie	*	-
183	Chocolate Chip Cookie	*	-
184	Chocolate Chip Cookie	*	-
185	Chocolate Confection	*	-
186	Chocolate Chip Cookie	*	-
187	Chocolate Chip Cookie	*	-
188	Chocolate Chip Cookie	*	-

Sample No.	Product Category	Analytical Result (ppm milk as NFDM) ³	Follow-Up Action
189	Chocolate Chip Cookie	*	-
190	Chocolate Chip Cookie	*	-
191	Chocolate Chip Cookie	*	-
192	Chocolate Confection	*	-
193	Chocolate Chip Cookie	*	-
194	Chocolate Chip Cookie	*	-
195	Chocolate Chip Cookie	*	-
196	Chocolate Chip Cookie	*	-
197	Chocolate Confection	*	-
198	Chocolate Confection	*	-
199	Chocolate Chip Cookie	*	-
200	Chocolate Confection	*	-
201	Chocolate Chip Cookie	*	-
202	Chocolate Confection	*	-
203	Chocolate Chip Cookie	*	-
204	Chocolate Confection	*	-
205	Chocolate Confection	*	-
206	Chocolate Confection	*	-
207	Chocolate Chip Cookie	*	-
208	Chocolate Confection	*	-
209	Chocolate Confection	*	-
210	Chocolate Confection	*	-