FDA U.S. FOOD & DRUG ADMINISTRATION

Technical Project Lead (TPL) Review: SE0015239

SE0015239: Middleton's Classic Blend	
Package Type	Cello[1]
Package Quantity	1 Cigar
Characterizing Flavor	None[2]
Length	126.9 mm
Diameter	9.57 mm
Tip	Plastic Tip
Attribute of SE Report	
Applicant	John Middleton Co.
Report Type	Regular
Product Category	Cigars
Product Sub-Category	Unfiltered, Sheet-Wrapped Cigar
Recommendation	
Issue a Substantially Equivalent (SE) order.	

[1] The applicant states "Cello is defined as clear wrap. The clear wrap used on JMC cigars is a polypropylene plastic wrap for both the New Product and Predicate Product as it was marketed on February 15, 2007."

[2] The applicant uses the term (b) (4) (b) (4) (b) (4). In this case, FDA determined that no additional information regarding characterizing flavor was necessary to compare the new and predicate tobacco products.

Technical Project Lead (TPL):

Digitally signed by Samantha Spindel -S3
Date: 2020.06.17 11:24:13 -04'00'

Samantha Spindel, Ph.D, M.Eng.
CDR, US Public Health Service
Engineering Branch Chief
Division of Product Science

Signatory Decision:

☒ Concur with TPL recommendation and basis of recommendation

☐ Concur with TPL recommendation with additional comments (see separate memo)

☐ Do not concur with TPL recommendation (see separate memo)

Digitally signed by Matthew R. Holman -S
Date: 2020.06.17 14:03:41 -04'00'

Matthew R. Holman, Ph.D.
Director
Office of Science

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1. BACKGROUND

1.1. PREDICATE TOBACCO PRODUCT

The applicant submitted the following predicate tobacco product:

SE0015239: Middleton's Classic Blend	
Product Name	Middleton's Cherry Blend
Package Type	Cello[1]
Package Quantity	1 Cigar
Characterizing Flavor	Cherry[3]
Length	126.9 mm
Diameter	9.62 mm
Tip	Plastic Tip

The predicate tobacco product is an unfiltered, sheet-wrapped cigar manufactured by the applicant.

1.2. REGULATORY ACTIVITY RELATED TO THIS REVIEW

On May 21, 2019, FDA received one SE Report (SE0015239) from Altria Client Services LLC on behalf of John Middleton Co. FDA issued an Acknowledgment letter to the applicant on May 24, 2019.

1.3. SCOPE OF REVIEW

This review captures all regulatory, compliance, and scientific reviews completed for this SE Report.

2. REGULATORY REVIEW

A regulatory review was completed by Nicholas Hasbrouck on May 24, 2019. The review concludes that the SE Report is administratively complete.

3. COMPLIANCE REVIEW

The Office of Compliance and Enforcement (OCE) completed a review to determine whether the applicant established that the predicate tobacco product is a grandfathered product (i.e., was commercially marketed in the United States other than exclusively in test markets as of February 15, 2007). The OCE review dated June 10, 2019, concludes that the evidence submitted by the applicant is adequate to demonstrate that the predicate tobacco product is grandfathered and, therefore, is an eligible predicate tobacco product.

[3] The applicant uses the term (b) (4) (b) (4) (b) (4) In this case, FDA determined that no additional information regarding characterizing flavor was necessary to compare the new and predicate tobacco products.

OCE also completed a review to determine whether the new tobacco product is in compliance with the Federal Food, Drug, and Cosmetic Act (FD&C Act) (see section 910(a)(2)(A)(i)(II) of the FD&C Act). The OCE reviews dated July 30, 2019, January 29, 2020, and May 11, 2020, conclude that the new tobacco product is in compliance with the FD&C Act.

4. SCIENTIFIC REVIEW

The new tobacco product has differences in characteristics compared to the predicate tobacco product, but the differences in the new tobacco product do not raise different questions of public health.

Scientific reviews were completed by the Office of Science (OS) for the following disciplines:

4.1. CHEMISTRY

A chemistry review was completed by Andrew Idzior on July 26, 2019.

The chemistry review concludes that the new tobacco product has different characteristics related to product chemistry compared to the predicate tobacco product, but the differences do not cause the new tobacco product to raise different questions of public health. The review identified the following differences:

- Plastic tip (polyethylene) composition includes (b) (4)
- 6% - 10% decrease of weight of all tobacco types and total tobacco in the tobacco blend
- 33% increase of (b) (4) in cigar binder
- 8% decrease of cigar filler weight, 9% decrease of cigar wrapper weight, 11% decrease of cigar binder weight, and 10% decrease of seam adhesive weight

The plastic tip contains (b) (4); because the tip is not combusted when the new tobacco product is used as intended, the addition of (b) (4) to the tip is not anticipated to affect smoke chemistry. Because the quantities of all tobacco types, total tobacco, and cigar filler, wrapper, binder, and seam adhesive weights are lower compared to the predicate tobacco product, these decreases in the new tobacco product are not anticipated to affect smoke chemistry. Although (b) (4) increased in the cigar binder, the overall total amount of (b) (4) in all components of the product (wrapper, binder, filler) in the new tobacco product is lower by 7% than that in the predicate tobacco product. In addition, the amount of (b) (4) as a percent of the cigar rod is less than 1%. Therefore, the (b) (4) l ingredient differences are not anticipated to affect smoke chemistry. The applicant submitted harmful and potentially harmful constituent (HPHC) data for arsenic, cadmium, nicotine, 4-(methylnitrosoamino)-1-(3-pyridyl)-1-butanone (NNK), and N-nitrosonornicotine (NNN) in the tobacco rod. The tobacco rod consists of all components of the cigar (i.e., the wrapper, binder, seam adhesive, and filler) except the tip and tip adhesive. Measures of all reported HPHCs in the unburned cigar rod of the new product were either lower or analytically equivalent compared to the predicate product. By taking into account the outcome of the HPHC measurements in the tobacco roll rod as well as the information described above pertaining to changes in the tobacco and ingredients, which are

not anticipated to affect smoke chemistry, in conjunction with the physical design parameter changes deferred by engineering, the Chemist concluded that mainstream smoke yield data was not necessary.

Therefore, the differences in characteristics between the new and predicate tobacco products do not cause the new tobacco product to raise different questions of public health from a chemistry perspective.

4.2. ENGINEERING

An engineering review was completed by Nashaat Rasheed on July 11, 2019.

The engineering review concludes that the new tobacco product has different characteristics related to product engineering compared to the predicate tobacco product, but the differences do not cause the new tobacco product to raise different questions of public health. The review identified the following differences:

- 7.5% decrease in tobacco filler mass
- 14.3% decrease in wrapper moisture
- 22.6% decrease in binder moisture
- 6.2% decrease in overall cigar mass
- Change in tobacco cut size (CPI):
    - 30% increase in (b) (4)
    - 7.5% decrease in (b) (4)

Taken together, the decreases in tobacco filler mass and overall cigar mass, and wrapper moisture and binder moisture, and the changes in tobacco cut size may affect smoke TNCO. Evaluation of smoke TNCO was not performed because HPHC data was submitted only for tobacco filler. For all of the constituents tested, the HPHC amounts in tobacco filler are either lower or analytically equivalent. The changes in moisture and mass are anticipated to decrease smoke TNCO. However, the overall impact of the total design changes on TNCO, in this case, is inconclusive because, as at this time, there is a lack of information to demonstrate whether the specific changes to cigar tobacco cut size would decrease or increase TNCO. Therefore, in this case, evaluation of cigar smoke TNCO by the applicant was deferred to Chemistry.

Therefore, the differences in characteristics between the new and predicate tobacco products do not cause the new tobacco product to raise different questions of public health from an engineering perspective.

4.3. MICROBIOLOGY

A microbiology review was completed by David Craft on July 10, 2019.

The microbiology review concludes that the new tobacco product has different characteristics related to product microbiology compared to the predicate tobacco product, but the differences

do not cause the new tobacco product to raise different questions of public health. The review identified the following differences:

- 16% decrease in NNK content
- 8% increase in NNN content
- Addition of (b) (4) mg[4]), a preservative, in the wrapper and binder
- 10% decrease in (b) (4) mg) in the cigar seam adhesive
- Removal of (b) (4) mg[4]), a preservative, in the wrapper and binder
- 7% decrease in target (b) (4) content in the finished cigar
- 12% decrease in target content of (b) (4), a humectant, in the finished cigar
- 10% decrease in target content of (b) (4), a humectant, in the finished cigar

The new tobacco product has an addition of (b) (4) mg[4]) to replace (b) (4) (b) (4) mg[4]), both preservatives, in the wrapper and binder. Additionally, the new tobacco product has decreases in the content of (b) (4) (10%) in the seam adhesive, and humectants, (b) (4) (7%), (b) (4) (12%), and (b) (4) (10%) in the finished cigar. These differences in preservative and humectant content between the new and predicate tobacco products could potentially affect the microbial stability of the product during storage. The applicant did not provide stability data over the storage duration of the new and predicate tobacco products to address this concern. However, the applicant provided moisture (% oven volatiles), NNN and NNK content of the finished new and predicate tobacco products. The total moisture content of the new and predicate tobacco products is less than 14%, which is insufficient to support fungal growth as scientific evidence that indicates bacterial growth can occur in tobacco at this moisture content is not currently available. Based on the low moisture content of the new tobacco product, analytically equivalent NNK and NNN content between the new and predicate products, lack of fermented tobacco and identical container closure systems, the differences in humectants and preservatives of the new tobacco product when compared to the predicate tobacco product do not cause the new tobacco product to raise different questions of public health from a microbiological perspective.

Therefore, the differences in characteristics between the new and predicate tobacco products do not cause the new tobacco product to raise different questions of public health from a microbiology perspective.

4.4. TOXICOLOGY

A toxicology review was completed by Theresa Thekkudan on July 15, 2019.

The toxicology review concludes that the new tobacco product has different characteristics related to product toxicology compared to the predicate tobacco product, but the differences do not cause the new tobacco product to raise different questions of public health. The review identified the following differences:

- Replacement of (b) (4) with (b) (4) in the wrapper and binder

[4] This is the combined amount in the binder and wrapper.

- Addition of (b) (4) to replace (b) (4) in the binder
- Addition of (b) (4) as a sweetener onto the plastic tip
- Nicotine, NNN and NNK in the new tobacco product are analytically equivalent, and arsenic and cadmium are analytically inequivalent and decreased in the new tobacco product by the two one-sided t-test (TOST) analysis

Overall, the ingredients in the new tobacco product were nearly all decreased or removed relative to the predicate tobacco product when compared on a per cigar basis. The amount of (b) (4) added to the new tobacco product represents less than 0.1% of the new tobacco product; therefore, the level of (b) (4) in the new tobacco product is unlikely to increase benzene smoke yields. Although (b) (4) was added in the new tobacco product, the net amount of (b) (4) from all product components was decreased in the new tobacco product compared to the predicate tobacco product. If the product is used as intended, the sweetener will not be combusted and is likely to be ingested rather than inhaled. Additionally, as an ingested ingredient, the addition of (b) (4) to the plastic tip is below the FDA Acceptable Daily Intake (ADI) at 15 mg/kg bw/day. These differences in product characteristics are not expected to have a measurable impact on smoke constituent yields because the HPHCs tested in the tobacco filler were either analytically equivalent or decreased in the new tobacco product.

Therefore, the differences in characteristics between the new and predicate tobacco products do not cause the new tobacco product to raise different questions of public health from a toxicology perspective.

5. ENVIRONMENTAL DECISION

An environmental review was completed by Thomas Creaven on June 10, 2019. Addendum reviews were completed by Thomas Creaven on October 7, 2019 and December 5, 2019.

A finding of no significant impact (FONSI) was signed by Kimberly Benson, Ph.D. on July 12, 2019. The FONSI was supported by an environmental assessment prepared by FDA on July 12, 2019.

6. CONCLUSION AND RECOMMENDATION

The following are the key differences in characteristics between the new and predicate tobacco products:

- Addition of (b) (4) as a sweetener onto the plastic (polyethylene) tip
- 7% decrease in target (b) (4) content in the finished cigar and 33% increase of (b) (4) in cigar binder
- Addition of (b) (4) mg^4) in the wrapper and binder and 10% decrease in (b) (4) mg) in the cigar seam adhesive
- Removal of (b) (4) mg^4) in the wrapper and binder

- 6% decrease in overall cigar mass
    - 8% decrease of cigar filler weight, 9% decrease of cigar wrapper weight, 11% decrease of cigar binder weight, and 10% decrease of seam adhesive weight
    - 6-% - 10% decrease of weight of all tobacco types and total tobacco in the tobacco blend
- 14.3% decrease in wrapper moisture and 22.6% decrease in binder moisture
- Change in tobacco cut size (CPI):
    - 30% increase in (b) (4)
    - 7.5% decrease in (b) (4)
- 12% decrease in target content of (b) (4), a humectant, in the finished cigar
- 10% decrease in target content of (b) (4), a humectant, in the finished cigar
- 22% decrease in arsenic and 30% decrease in cadmium

The applicant has demonstrated that these differences in characteristics do not cause the new tobacco product to raise different questions of public health. Although the plastic tip contains (b) (4), because the tip is not combusted when the new tobacco product is used as intended, the addition of (b) (4) to the tip is not anticipated to affect smoke chemistry. In addition, if the product is used as intended, the sweetener is likely to be ingested rather than inhaled, and, as an ingested ingredient, the addition of (b) (4) to the plastic tip is below the FDA ADI at 15 mg/kg bw/day. Although (b) (4) was added in the new tobacco product, the net amount of (b) (4) from all product components was decreased in the new tobacco product compared to the predicate tobacco product and does not cause the new tobacco product to raise different questions of public health. Although NNN is increased in the new tobacco product, this increase was found to be analytically equivalent per the two one-sided t-test analysis and does not cause the new tobacco product to raise different questions of public health. In addition, although the preservative (b) (4) was removed and (b) (4) was added to the new tobacco product, based on the low moisture content of the new tobacco product (< 14%), analytically equivalent NNK and NNN content between the new and predicate products, lack of fermented tobacco and identical container closure systems, the change in preservatives is not anticipated to substantially affect the stability of the new tobacco product. Lastly, the amount of (b) (4) added to the new tobacco product represents less than 0.1% of the new tobacco product; therefore, the level of (b) (4) in the new tobacco product is unlikely to increase benzene smoke yields. All other changes to the tobacco product discussed above are anticipated to either decrease or not have a measurable impact on smoke constituents. Therefore, the differences in characteristics between the new and predicate tobacco products do not cause the new tobacco product to raise different questions of public health.

The predicate tobacco product meets statutory requirements because it was determined that it is a grandfathered product (i.e., was commercially marketed in the United States other than exclusively in test markets as of February 15, 2007).

The new tobacco product is currently in compliance with the Federal FD&C Act. In addition, all of the scientific reviews conclude that the differences between the new and predicate tobacco products are such that the new tobacco product does not raise different questions of public health. I concur with these reviews and recommend that an SE order letter be issued.

FDA examined the environmental effects of finding this new tobacco product substantially equivalent and made a finding of no significant impact.

An SE order letter should be issued for the new tobacco product in SE0015239, as identified on the cover page of this review.