

**Bills Committee on Smoking (Public Health) (Amendment) Bill 2019  
(2020-2021 session)**

**List of follow-up actions required of the Administration  
arising from the discussion at the meeting on 30 March 2021**

The Administration's response on the items raised by Members is set out as follows.

2. The data<sup>1</sup> submitted by the manufacturer of a heated tobacco product ("HTP") to the Food and Drug Administration ("FDA") of the United States for the application of marketing authorisation revealed that the following 80 chemicals were either present in higher concentration in aerosols of HTP or not found in conventional cigarette smoke:

- 1) Glycidol
- 2) 1,2-Propanediol, 3-chloro-
- 3) 2-Furanmethanol
- 4) Furfural
- 5) 1,2,3-Propanetriol, diacetate
- 6) 1,2,3-Propanetriol, 1-acetate
- 7) Butylated hydroxytoluene
- 8) Diacetin
- 9) Pyranone
- 10) 5,7-Dimethoxycoumarin
- 11) Cyclohexane, 1,2-dioxo-
- 12) 2-Cyclopentene-1,4-dione
- 13) Benzyl alcohol
- 14) Labdane-8,15-diol, (13S)
- 15) Menthone
- 16) 3-Methylvaleric acid
- 17) Germacrene D
- 18) Ethyl dodecanoate (Ethyl laurate)
- 19) Stearate, ethyl-
- 20) Isoquinoline, 3-methyl
- 21) 1-Hydroxy-2-propanone
- 22) Ethyl linolenate
- 23) 2-Formyl-1-methylpyrrole

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<sup>1</sup> Philip Morris Products SA. Toxicological Assessment Report. Non-targeted differential screening analysis of THS 2.2. Nov 2017. Available at <https://digitalmedia.hhs.gov/tobacco/static/mrtpa/PMP/MR0000097.zip>

- 24) Bourbonene, beta-
- 25) Ethyl Vanillin
- 26) Phenylacetaldehyde
- 27) Ethyl 2,4-dioxohexanoate
- 28) Isolinderanolide
- 29) Menthol
- 30) 2-Methylcyclobutane-1,3-dione
- 31) Heneicosane, 2-methyl-
- 32) Eicosane, 2-methyl-
- 33) Isopulegone caffeate
- 34) (S)-cis-Verbenol
- 35) 3-Octanol
- 36) Neomenthyl acetate
- 37) Isomenthol
- 38) Oleoylglycine
- 39) Cyclohexane-1,2-dione, 3-methyl-
- 40) 3(2H)-Furanone, dihydro-2-methyl-
- 41) 2H-Pyran-2-one, tetrahydro-5-hydroxy
- 42) trans-4-Hydroxymethyl-2-methyl-1,3-dioxolane
- 43) Copaene
- 44) 2-Furanmethanol, 5-methyl-
- 45) 2,3-Dihydro-5-hydroxy-6-methyl-4H-pyran-4-one (Dihydromaltol)
- 46) Octanoic acid, 2-propenyl ester
- 47) Cyclohexanone, 5-methyl-2-(1-methylethyl)-, cis- (D,L-Isomenthone)
- 48) Menthofuran
- 49) 2(5H)-Furanone
- 50) 1-Hydroxy-2-butanone
- 51) 1,4-Dioxane, 2-ethyl-5-methyl-
- 52) Ethyl linoleate
- 53) Anhydro linalool oxide
- 54) Propylene glycol
- 55) Ergosterol
- 56) Anatabine
- 57) cis-sesquisabinene hydrate
- 58) Tyrosine, 3-hydroxy

- 59)2-Propanone, 1-(acetyloxy)-
- 60)Methyl furoate
- 61)Benzene, 1,2,3,4-tetramethyl-4-(1-methylethenyl)-
- 62)2-Furancarboxaldehyde, 5-methyl- (5-Methylfurfural)
- 63)Benzenemethanol, 4-hydroxy-
- 64)Hexadecanoic acid, ethyl ester
- 65)Glycidyl acetate
- 66)Eicosane, 3-methyl-
- 67)Pyridoxin
- 68)4(H)-Pyridine, N-acetyl-
- 69)Lanost-8-en-3-ol, 24-methylene-, (3beta)
- 70)Cyclohexanol, 5-methyl-2-(1-methylethenyl)- (Menth-8-en-3-ol)
- 71)Maltozazine
- 72)Menthyl acetate
- 73)2-Cyclohexen-1-one, 3-methyl-6-(1-methylethyl)- (Piperitone)
- 74)1H-Indene, 2,3-dihydro-1,1,5,6-tetramethyl-
- 75)Butyrolactone
- 76)Benzoic acid, 2,5-dihydroxy-methyl
- 77)2-Furanmethanol, tetrahydro-
- 78)3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl- (Terpineol)
- 79)2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)- (6,8-P-Menthadien-2-one)
- 80)12,14-Labdadiene-7,8-diol, (7beta,8alpha,12Z)

3. FDA's reviews indicated that toxicology/carcinogenicity/genotoxicity data for many of the chemicals are either not available or insufficient for evaluation of their impacts on health. Among these 80 chemicals, four are possible carcinogens (items (1) to (4)), 19 are identified with genotoxic and/or carcinogenic potential, and 20 chemicals exhibiting potential health effects<sup>2,3</sup>.

**Food and Health Bureau  
Department of Health  
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<sup>2</sup> FDA. PMTA Technical Project Lead Review (p.32-33). Available at <https://www.fda.gov/media/124247/download>

<sup>3</sup> FDA. Scientific Review of MRTP Application - Technical Project Lead (p.24). Available at <https://www.fda.gov/media/139796/download>