

Table 4: List of evaluated HTP brands

Product name	Product technology	Product manufacturer	Consumable	Puffs per consumable
Lil	Heated Tobacco	KT & G	Fiit Change (KR) - Uncrushed Capsule	12
Glo	Heated Tobacco	British American Tobacco	Kent Neosticks Brights Tobacco	8
Lil Plus	Heated Tobacco	KT & G	Fiit Sparky	8
Ploom S	Heated Tobacco	Japan Tobacco	Mevius Menthol	8
Lil Hybrid	Hybrid	KT & G	Miix Golden Taste	8
Ploom Tech	Hybrid	Japan Tobacco International	MEVIUS Regular	50
Ploom Tech +	Hybrid	Japan Tobacco International	Mevius Mild Blend	50
IQOS	Heated Tobacco	Philip Morris International	Heets	12

Table 5: HPHC yields in evaluated HTP brands (µg/100 mL)

Compound	A	B	C	D	E	F	G	H
1,3-Butadiene	5.26 x 10 ⁻²	6.59 x 10 ⁻³	2.13 x 10 ⁻²	5.18 x 10 ⁻²	1.09 x 10 ⁻²	7.27 x 10 ⁻³	1.09 x 10 ⁻²	6.59 x 10 ⁻³
1-Amino naphthalene	6.14 x 10 ⁻⁶	1.82 x 10 ⁻⁶	4.09 x 10 ⁻⁶	ND	ND	7.88 x 10 ⁻⁶	ND	6.14 x 10 ⁻⁶
2-Amino naphthalene	ND	ND	ND	4.20 x 10 ⁻⁶	ND	ND	2.06 x 10 ⁻⁶	ND
4-Aminobiphenyl	8.33 x 10 ⁻⁷	2.27 x 10 ⁻⁷	5.56 x 10 ⁻⁷	1.45 x 10 ⁻⁶	ND	1.90 x 10 ⁻⁶	2.42 x 10 ⁻⁷	1.36 x 10 ⁻⁶
Acetaldehyde	2.84 x 10 ¹	6.80 x 10 ⁰	2.02 x 10 ¹	3.28 x 10 ¹	6.72 x 10 ⁻²	1.76 x 10 ¹	2.89 x 10 ⁻¹	9.30 x 10 ⁰
Acetamide	2.34 x 10 ⁻¹	1.26 x 10 ⁻¹	2.48 x 10 ⁻¹	5.05 x 10 ⁻¹	ND	3.59 x 10 ⁻¹	6.23 x 10 ⁻²	1.94 x 10 ⁻¹
Acetone	3.81 x 10 ⁰	1.50 x 10 ⁰	2.81 x 10 ⁰	5.38 x 10 ⁰	ND	1.24 x 10 ⁰	ND	1.12 x 10 ⁰
Acrolein	1.19 x 10 ⁰	5.41 x 10 ⁻¹	8.89 x 10 ⁻¹	1.46 x 10 ⁰	3.30 x 10 ⁻²	5.40 x 10 ⁻¹	5.27 x 10 ⁻²	1.62 x 10 ⁻¹
Acrylamide	9.55 x 10 ⁻²	5.16 x 10 ⁻²	1.56 x 10 ⁻¹	2.76 x 10 ⁻¹	ND	2.15 x 10 ⁻¹	2.18 x 10 ⁻²	9.53 x 10 ⁻²
Acrylonitrile	2.43 x 10 ⁻²	7.27 x 10 ⁻³	1.62 x 10 ⁻²	2.39 x 10 ⁻²	ND	7.27 x 10 ⁻³	1.09 x 10 ⁻²	7.27 x 10 ⁻³
Ammonia	1.49 x 10 ⁰	9.82 x 10 ⁻¹	1.24 x 10 ⁰	1.59 x 10 ⁰	ND	5.78 x 10 ⁻¹	2.59 x 10 ⁻¹	2.09 x 10 ⁰
Arsenic	8.18 x 10 ⁻⁵	1.45 x 10 ⁻⁴	5.45 x 10 ⁻⁵	1.82 x 10 ⁻⁴	6.36 x 10 ⁻⁵	8.18 x 10 ⁻⁵	6.36 x 10 ⁻⁵	8.18 x 10 ⁻⁵
Benzene	7.06 x 10 ⁻²	3.86 x 10 ⁻³	4.14 x 10 ⁻²	8.24 x 10 ⁻²	ND	1.27 x 10 ⁻²	1.70 x 10 ⁻²	3.86 x 10 ⁻³
Benz[a]anthracene	2.35 x 10 ⁻⁴	5.52 x 10 ⁻⁵	1.88 x 10 ⁻⁴	3.15 x 10 ⁻⁴	ND	4.68 x 10 ⁻⁴	1.27 x 10 ⁻⁵	1.41 x 10 ⁻⁴
Benzo[a]pyrene	ND	ND	ND	1.42 x 10 ⁻⁰⁴	2.00 x 10 ⁻⁰⁵	ND	2.00 x 10 ⁻⁰⁵	ND
Catechol	8.08 x 10 ⁻¹	1.95 x 10 ⁻²	6.79 x 10 ⁻¹	2.17 x 10 ⁰	ND	7.53 x 10 ⁻¹	9.09 x 10 ⁻³	4.42 x 10 ⁻²

Cadmium	2.05 x 10 ⁻⁵	3.48 x 10 ⁻⁵	1.36 x 10 ⁻⁵	4.24 x 10 ⁻⁵	3.64 x 10 ⁻⁵	2.00 x 10 ⁻⁵	3.64 x 10 ⁻⁵	2.05 x 10 ⁻⁵
Chromium	1.33 x 10 ⁻³	7.52 x 10 ⁻⁴	5.02 x 10 ⁻⁴	5.02 x 10 ⁻⁴	8.86 x 10 ⁻⁴	1.92 x 10 ⁻³	9.70 x 10 ⁻⁴	1.95 x 10 ⁻³
Dibenz[a,h]anthracene	2.82 x 10 ⁻⁵	2.82 x 10 ⁻⁵	1.88 x 10 ⁻⁵	1.88 x 10 ⁻⁵	ND	2.73 x 10 ⁻⁵	2.18 x 10 ⁻⁵	2.82 x 10 ⁻⁵
Ethylene oxide	8.18 x 10 ⁻³	ND	ND	3.47 x 10 ⁻²	ND	7.27 x 10 ⁻³	1.27 x 10 ⁻²	1.45 x 10 ⁻²
Formaldehyde	1.76 x 10 ⁰	1.59 x 10 ⁰	6.10 x 10 ⁻¹	1.21 x 10 ⁰	8.15 x 10 ⁻²	8.40 x 10 ⁻¹	2.69 x 10 ⁻¹	6.16 x 10 ⁻¹
Mercury	3.30 x 10 ⁻⁴	2.33 x 10 ⁻⁴	2.42 x 10 ⁻⁴	3.10 x 10 ⁻⁴	3.82 x 10 ⁻⁵	3.98 x 10 ⁻⁴	1.27 x 10 ⁻⁴	1.29 x 10 ⁻⁴
Hydroquinone	4.54 x 10 ⁻¹	1.41 x 10 ⁻²	3.91 x 10 ⁻¹	1.09 x 10 ⁰	ND	7.94 x 10 ⁻²	2.18 x 10 ⁻²	4.70 x 10 ⁻²
Isoprene	2.27 x 10 ⁻¹	9.32 x 10 ⁻³	1.07 x 10 ⁻¹	3.25 x 10 ⁻¹	ND	3.09 x 10 ⁻²	1.45 x 10 ⁻²	9.32 x 10 ⁻³
m-Cresol	4.32 x 10 ⁻³	1.36 x 10 ⁻³	3.18 x 10 ⁻³	2.88 x 10 ⁻³	ND	3.64 x 10 ⁻³	1.82 x 10 ⁻³	1.36 x 10 ⁻³
Methyl ethyl ketone	1.10 x 10 ⁰	2.50 x 10 ⁻¹	6.98 x 10 ⁻¹	1.15 x 10 ⁰	ND	8.33 x 10 ⁻¹	1.05 x 10 ⁻¹	2.50 x 10 ⁻¹
Nickel	3.61 x 10 ⁻³	3.61 x 10 ⁻³	2.41 x 10 ⁻³	2.41 x 10 ⁻³	3.77 x 10 ⁻³	3.62 x 10 ⁻³	6.89 x 10 ⁻⁴	3.61 x 10 ⁻³
Nicotine	1.39 x 10 ²	1.50 x 10 ²	1.35 x 10 ²	1.72 x 10 ²	3.90 x 10 ¹	9.45 x 10 ¹	2.36 x 10 ¹	1.02 x 10 ²
N-Nitroso nornicotine (NNN)	4.72 x 10 ⁻⁴	3.92 x 10 ⁻³	3.67 x 10 ⁻⁴	1.55 x 10 ⁻³	1.82 x 10 ⁻⁵	2.68 x 10 ⁻³	7.42 x 10 ⁻⁵	2.18 x 10 ⁻³
o-Cresol	7.42 x 10 ⁻³	1.82 x 10 ⁻³	8.59 x 10 ⁻³	5.95 x 10 ⁻³	ND	5.45 x 10 ⁻³	ND	1.82 x 10 ⁻³
o-Toluidine	2.12 x 10 ⁻⁴	2.37 x 10 ⁻⁵	1.35 x 10 ⁻⁴	1.37 x 10 ⁻⁴	ND	1.14 x 10 ⁻⁴	5.75 x 10 ⁻⁵	5.65 x 10 ⁻⁵
Lead	1.97 x 10 ⁻⁴	1.11 x 10 ⁻⁴	7.42 x 10 ⁻⁵	2.45 x 10 ⁻⁴	4.25 x 10 ⁻⁵	3.69 x 10 ⁻⁴	7.47 x 10 ⁻⁵	1.11 x 10 ⁻⁴
p-Cresol	7.73 x 10 ⁻³	2.27 x 10 ⁻³	5.45 x 10 ⁻³	5.15 x 10 ⁻³	ND	3.64 x 10 ⁻³	3.64 x 10 ⁻³	2.27 x 10 ⁻³
Phenol	2.00 x 10 ⁻¹	5.91 x 10 ⁻³	1.78 x 10 ⁻¹	1.70 x 10 ⁻¹	9.09 x 10 ⁻³	2.85 x 10 ⁻²	9.09 x 10 ⁻³	5.91 x 10 ⁻³
Propionaldehyde	1.56 x 10 ⁰	4.05 x 10 ⁻¹	1.16 x 10 ⁰	2.06 x 10 ⁰	ND	9.18 x 10 ⁻¹	7.27 x 10 ⁻²	7.59 x 10 ⁻¹
Propylene Oxide	1.25 x 10 ⁻²	3.55 x 10 ⁻³	9.20 x 10 ⁻³	2.06 x 10 ⁻²	ND	3.55 x 10 ⁻³	5.67 x 10 ⁻³	3.55 x 10 ⁻³
Pyridine	1.05 x 10 ⁰	ND	6.34 x 10 ⁻¹	9.31 x 10 ⁻¹	ND	5.62 x 10 ⁻¹	9.09 x 10 ⁻³	ND
Resorcinol	3.64 x 10 ⁻³	3.64 x 10 ⁻³	2.42 x 10 ⁻³	8.33 x 10 ⁻³	ND	3.64 x 10 ⁻³	5.45 x 10 ⁻³	3.64 x 10 ⁻³
Selenium	1.89 x 10 ⁻⁴	ND	1.26 x 10 ⁻⁴	2.38 x 10 ⁻⁴	ND	1.45 x 10 ⁻⁴	7.03 x 10 ⁻⁵	ND
Styrene	2.39 x 10 ⁻²	ND	3.05 x 10 ⁻²	1.60 x 10 ⁻¹	ND	9.09 x 10 ⁻³	3.64 x 10 ⁻³	ND
Toluene	2.25 x 10 ⁻¹	4.64 x 10 ⁻²	1.80 x 10 ⁻¹	2.75 x 10 ⁻¹	ND	5.33 x 10 ⁻²	2.18 x 10 ⁻²	1.39 x 10 ⁻²
Hydrogen cyanide	3.98 x 10 ⁻¹	1.19 x 10 ⁻¹	2.65 x 10 ⁻¹	6.62 x 10 ⁻¹	ND	2.13 x 10 ⁻¹	9.45 x 10 ⁻²	2.12 x 10 ⁻¹
Vinyl chloride	1.49 x 10 ⁻⁴	1.49 x 10 ⁻⁴	9.95 x 10 ⁻⁵	3.32 x 10 ⁻⁴	ND	1.49 x 10 ⁻⁴	2.38 x 10 ⁻⁴	1.49 x 10 ⁻⁴