元素检测
Element Testing

Test Report

Report No.: ELE2510C22650 Date: Oct. 22, 2025 Page No.: 1 of 7

Applicant:	GVG PRO
Address:	2 route de l'ouest 94390 BONNEUIL SUR MARNE, FRANCE

The following sample was submitted and identified by/on behalf of the client as:

Product Name:	Watermelon Kiwi Ice 10mg
Flavour:	Watermelon Kiwi Ice
Nicotine Conc.:	10mg/mL
E-liquid Bottle Volume:	10 mL
Sample Received Date:	2025.10.15
Testing Period:	2025.10.15—2025.10.22
Test Method:	Please refer to the following page(s).
Test Result(s):	Please refer to the following page(s).

Test Items		Test Requested
1	Carbonyl Compounds: Formaldehyde, Acetaldehyde, Acrolein, Crotonaldehyde	Emission testing according to Article 20 of Tobacco Product Directive (2014/40/EU) & UK Statutory Instruments on The Tobacco and Related Products Regulations 2016, PART 6- Electronic cigarettes.
2	Metals: Aluminum, Chromium, Iron, Nickel, Tin, Lead, Cadmium, Arsenic, Antimony, Mercury, Copper	
3	Nicotine and consistency	
4	Diacetyl and Pentane 2,3 Dione	
5	Ethylene Glycol and Diethylene Glycol	
6	Specific Nitrosamines: N-nitrosonornicotine (NNN), 4-(N-methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	
7	VOC substances: Toluene, Benzene, 1,3-Butadiene, Isoprene	

Signed for and on behalf of

Shenzhen Element Testing Co., Ltd.

Noel Yin

Technical Manager

SHENZHEN ELEMENT TESTING CO., LTD.

Test Results

With reference to Afnor standardization XP D90-300-3:2021, a vaping robot was used to collect the vapor.

puff/vaporisation duration	3.0 s±0.1 s
puffs period	30 s±0.5 s
number of puffs per series	20
Time between 2 series	300 s±120 s
volume for generation of a puff	55 mL±0.3 mL
maximum flow rate	18.3 mL/s±1.8 mL/s
head loss excluding trapping	< 1000 Pa±50 Pa
Number of series	5
total number of puffs	100
total vaporisation duration	300 s
puff profile	square profile

The tests were performed in a controlled environment at (22 ± 2) °C and (60 ± 5) % relative humidity. The actual atmospheric conditions during testing were maintained within these specified limits.

1. Carbonyl Compounds Result(s)

Method: According to Afnor XP D90-300-3:2021 Annex A.5, the aerosol generated by the e-cigarette is absorbed by the impactor containing 40mL acidified solution of 2,4-dinitrophenylhydrazine (DNPH) in acetonitrile. The solution was filtered and analyzed by reverse phase high-performance liquid chromatography and determined using a DAD detector.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
Formaldehyde	50-00-0	ng/mg	2.80	8.40	ND
Acetaldehyde	75-07-0	ng/mg	1.77	5.30	9.10
Acrolein	107-02-8	ng/mg	0.17	0.50	ND
Crotonaldehyde	123-73-9	ng/mg	2.38	7.15	ND

Note:
- ng = nanogram
- mg= milligram
- ND = Not Detected (lower than LOD)
- LOD = Limit of Detection
- LOQ = Limit of Quantitation
- “ng/mg”, the amount of each test item in “ng” obtained by instrument analysis dividing the mass of vaporized liquid of 100 puffs in “mg” obtained by weighing

2. Metals Result(s)

Method: According to Afnor XP D90-300-3:2021 Annex A.6, the aerosol produced by the e-cigarette is absorbed by the impactor containing 20 mL nitric acid solution. The solution was filtered and analyzed by ICP-MS.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
Chromium (Cr)	7440-47-3	ng/mg	0.050	0.151	ND
Nickel (Ni)	7440-02-0	ng/mg	0.044	0.133	ND
Iron (Fe)	7439-89-6	ng/mg	0.193	0.578	ND
Aluminum (Al)	7429-90-5	ng/mg	0.211	0.632	ND
Tin (Sn)	7440-31-5	ng/mg	0.103	0.308	ND
Lead (Pb)	7439-92-1	ng/mg	0.043	0.130	ND
Cadmium (Cd)	7440-43-9	ng/mg	0.035	0.104	ND
Arsenic (As)	7440-38-2	ng/mg	0.060	0.180	ND
Antimony (Sb)	7440-36-0	ng/mg	0.035	0.104	ND
Mercury (Hg)	7439-97-6	ng/mg	0.051	0.153	ND
Copper (Cu)	7440-50-8	ng/mg	0.035	0.104	ND

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- “ng/mg”, the amount of each test item in “ng” obtained by instrument analysis dividing the mass of vaporized liquid of 100 puffs in “mg” obtained by weighing

3. Nicotine and Consistency Test

Method: According to Afnor XP D90-300-3:2021 Annex A.3, wipe the clamp with isopropyl alcohol. Let stand for a minute. The aerosol produced by the e-cigarette is absorbed by the Cambridge filter. Remove the Cambridge filter and place it into a centrifmcge tube, add 20 mL of Isopropyl alcohol and 0.2mL internal standard stock solution. Shaken at 210 rpm for 30 min, and the solution was filtered and analyzed by GC-FID.

Test Item	Nicotine (CAS No.:54-11-5) emission (mcg/mg)				Entrapment Efficiency (%)	mcg /puff
Tested Series	Series 1*	Series 3*	Series 5*	AVG		
Value	8.38	8.47	8.92	8.59	95.4	86
Deviation (%)	2.4	1.4	3.8	-	-	-

Note:
- mcg = microgram
- mg = milligram
- ND = Not Detected (lower than LOD)
- LOD = Limit of Detection =1.45 mcg/mg
- LOQ = Limit of Quantitation = 4.35 mcg/mg
- 1 series = 20puffs
- * Values used for determination of consistency of nicotine emission
- Under the conditions of the test and with reference to AFNOR XP D90-300-3:2021, the electronic cigarette delivers a dose of nicotine at consistent levels.
- “mcg/mg”, the amount of each test item in “mcg” obtained by instrument analysis dividing the mass of vaporized liquid of 20 puffs in “mg” obtained by weighing.
- △ Nicotine content of liquid is tested with reference to Afnor XP D90-300-2:2021 Annex A.4, with the LOQ of 0.0005 mg/mL, is involved in the calculation of entrapment efficiency.
- The entrapment efficiency is calculated as the ratio between the amount of nicotine measured in the emissions and the amount of nicotine theoretically vaporized. Theoretically vaporized nicotine is determined from the mass of liquid vaporized and the nicotine content in the liquid.

4. Diacetyl and Pentane 2,3 Dione Result(s)

Method: According to Afnor XP D90-300-3:2021 Annex A.4, the aerosol produced by the e-cigarette is absorbed by the impactor containing 20mL ethanol. The solution was filtered and analyzed by GC-MS.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
Diacetyl	431-03-8	ng/mg	6.3	18.9	ND
Pentane 2,3 Dione	600-14-6	ng/mg	12.6	37.7	ND

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5. Ethylene Glycol and Diethylene Glycol Result(s)

Method: With reference to In House Method, wipe the clamp with isopropyl alcohol. Let stand for a minute. 20 mL of methanol was added to the impactor connected in series with the Cambridge filter to absorb the aerosol. The Cambridge filter was removed and placed in methanol, shaken at 210 rpm for 30 min, and then the solution was filtered and analyzed by GC-MS.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
Ethylene Glycol	107-21-1	ng/mg	13.0	39.0	ND
Diethylene Glycol	111-46-6	ng/mg	15.8	47.5	ND

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- LOQ = Limit of Quantitation
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6. Specific Nitrosamines Result(s)

Method: According to CORESTA Recommended Method No. 75(2022), the aerosol produced by the e-cigarette is absorbed by the impactor containing 20 mL of 100 mM ammonium acetate solution. The solution was filtered and analyzed by LC-MS/MS.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
N-nitrosonornicotine (NNN)	80508-23-2	ng/mg	0.48	1.44	ND
4-(N-methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	64091-91-4	ng/mg	0.48	1.44	ND

Note:
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- mg = milligram
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- LOD = Limit of Detection
- LOQ = Limit of Quantitation
- “ng/mg”, the amount of each test item in “ng” obtained by instrument analysis dividing the mass of vaporized liquid of 100 puffs in “mg” obtained by weighing

7. VOC substances Result(s)

Method: According to CORESTA Recommended Method No.70(2019), wipe the clamp with isopropyl alcohol. Let stand for a minute. 20 mL of methanol was added to the impactor connected in series with the Cambridge filter to absorb the aerosol. The Cambridge filter was removed and placed in methanol, shaken at 210 rpm for 30 min, and then the solution was filtered and analyzed by GC-MS.

Test Item	CAS No.	Unit	LOD	LOQ	Result(s)
Toluene	108-88-3	ng/mg	1.67	5.01	ND
Benzene	71-43-2	ng/mg	1.67	5.01	ND
1,3-Butadiene	106-99-0	ng/mg	1.67	5.01	ND
Isoprene	78-79-5	ng/mg	1.67	5.01	ND

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- “ng/mg”, the amount of each test item in “ng” obtained by instrument analysis dividing the mass of vaporized liquid of 100 puffs in “mg” obtained by weighing

Test Report

Photo(s) of the sample(s)

***** End of Report *****

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