



中国认可
国际互认
检测
TESTING
CNAS L4549

Test Report

Report No.: JC-CPC240031-2

**For Tobacco Product Directive (2014/40/EU) Article 19
(Harmful Constituents Test in Aerosol for TPD Notification)**

Applicant: LONO International Co., Limited

Manufacturer: /

Name of Sample: HNB tobacco

Flavor: Bronze

Brand: /

Model: /

Date of Issuance: Jan. 29, 2024

Skyte Testing Services Guangdong Co., Ltd.



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Report Date: Jan. 29, 2024

Applicant Name: LONO International Co., Limited

Applicant Add.: FLAT 1512, 15/F, LUCKY CENTRE, NO.165-171 WAN CHAI ROAD, WAN CHAI, HONG KONG

Test sample was submitted by the applicant, report on the submitted sample said to be:

Sample Name: HNB tobacco

Flavor: Bronze

Sample Received Date: Jan. 10, 2024

Testing Period: Jan. 10, 2024 to Jan. 23, 2024

Tests Conducted: As requested by the applicant. See the following pages for details.

Test Requirement:

Test Items	Test Requirement
Nicotine and Nicotine Consistence, Alcohols, Ketones, Carbonyls, Volatile Organic Compounds (VOC), Metal and Nonmetal Elements, Carbon Monoxide, Tobacco Specific Nitrosamine, Total Particulate Matter, Tar (NFDPM), Moisture	<i>Tobacco Product Directive (2014/40/EU) Article 19</i>

Signed for and on behalf of Skyte Testing Services Guangdong Co., Ltd.



Vanessa Huang / Technical Director
CNAS Approved Signatory

Remark: Please note that every statement made in this report is only valid for the samples tested and reported herein. This report shall not be reproduced except in full, without the written approval of SKYTE. The sample's information was provided by the applicant, SKYTE has no responsibility for the truth of such information.

Skyte Testing Services Guangdong Co., Ltd.
Add.:7/F, Bldg 1, Jia'an Hi-Tech Industrial Park,
1st Liuxian Road, Block 67, Bao'an District, Shenzhen, P.R.C.

Website: www.skyte.com.cn
Email: service@skyte.com.cn
Postcode: 518101

Tel: (86-0755) 3323 9933
Fax: (86-0755) 2672 7113
Hot Line: 400-6898-200

Smoking Condition

Smoking Machine Condition 1:

Number of series: 1

Number of stick per series: 1

Number of puffs per stick: 12 puffs

Total number of puffs: 12 puffs

Puffing duration: (2.0±0.02) s

Time between 2 puffs: (30.0±0.5) s

Time between 2 series: (300±120) s

Puff volume: (55.0±0.3) mL

Maximum flow rate: (40-50) mL/s

Inhalation profile: Sine wave

Device power setting: Fixed

Smoking basis: Health Canada (1999)

The above settings are tested for Carbon Monoxide.

Smoking Machine Condition 2:

Number of series: 2

Number of stick per series: 1

Number of puffs per stick: 12 puffs

Total number of puffs: 24 puffs

Puffing duration: (2.0±0.02) s

Time between 2 puffs: (30.0±0.5) s

Time between 2 series: (300±120) s

Puff volume: (55.0±0.3) mL

Maximum flow rate: (40-50) mL/s

Inhalation profile: Sine wave

Device power setting: Fixed

Smoking basis: Health Canada (1999)

The above settings are tested for items other than Carbon Monoxide.

Test Results

1. Nicotine Consistence

Test Item	Test Results (mg/stick)			AVG (mg/stick)	Target Value*
	Serie1 (1~2 stick)	Serie3 (5~6 stick)	Serie5 (9~10 stick)		
Nicotine Consistence	0.99	1.06	0.94	1.00	—
Deviation	-1.00%	6.00%	-6.00%	—	30%

2. Alcohols

Test Items	CAS No.	Test Results (µg/stick)	MDL (µg/stick)
Ethylene Glycol	107-21-1	N.D.	0.2
Diethylene Glycol	111-46-6	N.D.	0.2

3. Ketones

Test Items	CAS No.	Test Results (µg/stick)	MDL (µg/stick)
Diacetyl	431-03-8	27.5	0.06
2,3-Pentanedione	600-14-6	N.D.	0.80

4. Carbonyls

Test Items	CAS No.	Test Results (µg/stick)	MDL (µg/stick)
Formaldehyde	50-00-0	12.2	0.04
Acetaldehyde	75-07-0	54.2	0.08
Acrolein	107-02-8	8.70	0.06
Crotonaldehyde	123-73-9	1.55	0.40

5. Volatile Organic Compounds (VOC)

Test Items	CAS No.	Test Results (µg/stick)	MDL (µg/stick)
Benzene	71-43-2	N.D.	0.4
Toluene	108-88-3	0.76	0.4
1,3-Butadiene	106-99-0	N.D.	4.0
Isoprene	78-79-5	2.01	0.4

6. Metal and Nonmetal Elements

Test Items	CAS No.	Test Results (ng/stick)	MDL (ng/stick)
Chromium (Cr)	7440-47-3	N.D.	3
Nickel (Ni)	7440-02-0	N.D.	3
Cadmium (Cd)	7440-43-9	N.D.	3
Lead (Pb)	7439-92-1	N.D.	3
Arsenic (As)	7440-38-2	N.D.	3
Antimony (Sb)	7440-36-0	N.D.	3
Tin (Sn)	7440-31-5	N.D.	3
Mercury (Hg)	7439-97-6	N.D.	3
Copper (Cu)	7440-50-8	N.D.	3
Aluminum (Al)	7429-90-5	N.D.	3
Iron (Fe)	7439-89-6	N.D.	3

7. Tobacco Specific Nitrosamine

Test Items	CAS No.	Test Results (ng/stick)	MDL (ng/stick)
NNN	16543-55-8	33.8	2.5
NNK	64091-91-4	14.7	2.5
NAB	1133-64-8	N.D.	2.5
NAT	887407-16-1	N.D.	2.5

8. Nicotine and the Main Constituents

Test Items	CAS No.	Test Results (mg/stick)	MDL (mg/stick)
Nicotine	54-11-5	1.00	0.005
Carbon Monoxide	630-08-0	0.17	0.01
Total Particulate Matter	—	40.65	—
Tar (NFDPM)	—	12.00	—
Moisture	7732-18-5	13.24	—

Tested by: Qin Caiyue, Yin Yuanyue, Chen Junlong, Zhang Mengting, Wei Wenlong, Ruan Jie, Han Xu

Checked by: Huang Xiangwei, Xu Guichun, Zhang Pingping

Remarks:

- (1) mg/stick = milligrams per stick
- (2) µg/stick = microgram per stick
- (3) ng/stick = nanogram per stick
- (4) MDL = method detection limit
- (5) N.D. = not detected, less than MDL
- (6) Tar (NFDPM) = Nicotine Free Dry Particulate Matter
- (7) * = The target value is quoted from AFNOR XP D90-300-3:2021 Annex B.
- (8) The test items of Antimony (Sb), Tin (Sn), Mercury (Hg), Copper (Cu), Aluminum (Al), Iron (Fe), Tobacco Specific Nitrosamine, Total Particulate Matter, Carbon monoxide and Tar (NFDPM) were not accredited by CNAS.

Test Methods

Test Items	Test Methods	Test Instruments
Nicotine and Nicotine Consistence	Health Canada T-115 (1999)	GC-FID
Ethylene glycol	C-QT-1800-TP (In-house test method)	GC-FID
Diethylene glycol		
Diacetyl	AFNOR XP D90-300-3:2021 Annex A.4	GC-MS
2,3-Pentanedione		
Formaldehyde	CORESTA RECOMMENDED METHOD No.74 (2019)	UPLC-PDA
Acetaldehyde		
Acrolein		
Crotonaldehyde		
Benzene	Health Canada T-116 (1999)	GC-MS
Toluene		
1,3-Butadiene		
Isoprene		
Chromium (Cr)	Health Canada T-109 (1999)	ICP-MS
Nickel (Ni)		
Cadmium (Cd)		
Lead (Pb)		
Arsenic (As)		
Antimony (Sb)		
Tin (Sn)		
Copper (Cu)		
Aluminum (Al)		
Iron (Fe)		

Test Items	Test Methods	Test Instruments
Mercury (Hg)	Health Canada T-108 (1999)	ICP-MS
NNN	CORESTA RECOMMENDED METHOD No.75 (2022)	LC-MS/MS
NNK		
NAB		
NAT		
Carbon Monoxide	C-QT-1930-TP (In-house test method)	Smoke and dusts analyzer
Total Particulate Matter	Health Canada T-115 (1999)	Electronic Balance
Tar (NFDPM)		—
Moisture	CORESTA RECOMMENDED METHOD No.56 (2018)	Karl Fisher - Moisture meter

Sample Photo



JC-CPC240031-2

(End of report)