

TEST REPORT



Report No.: A2206222-C01-R03

Date: June 30, 2022

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Applicant: Shenzhen Flame Technology Co., Ltd.
Address: Plant 3003, West Block, Hengfang Laobing Building, No.3012, Xingye Road, Labour Community, Xixiang Street, Bao'an District, Shenzhen City, Guangdong Province, China

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client:

Sample Name	MOTI PIIN C4000, LOMO FINE C4000
Trademark	MOTI, LOMO
Manufacturer	Shenzhen Flame Technology Co., Ltd.
Sample Received Date	June 22, 2022
Testing Period	June 24 - 29, 2022
Test Method & Test Result	Please refer to following pages.

Test Requested

As specified by client, according to RoHS Directive 2011/65/EU with amendment (EU) 2015/863, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Phthalates(DBP, BBP, DEHP, DIBP) in the tested materials of the submitted sample(s).

Result

Pass

Tested by:

Dimi Ding

Approved by:

[Signature]

Reviewed by:

Anne Zhao

Date of issue:

June 30, 2022



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Test Method

(1) XRF screening limits for regulated elements according to IEC 62321-3-1:2013 (Unit: mg/kg)

Element	Polymers	Metals	Composite material
Pb	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cd	$BL \leq (70-3\sigma) < X$ $< (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X$ $< (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

(2) Chemical screening limits for Phthalates

Test Item(s)	Screening limits(Unit: mg/kg)
Dibutyl phthalate(DBP)	$BL \leq 600 < IN$
Benzylbutyl phthalate(BBP)	$BL \leq 600 < IN$
Di-2-ethylhexyl phthalate(DEHP)	$BL \leq 600 < IN$
Diisobutyl phthalate(DIBP)	$BL \leq 600 < IN$

(3) Chemical Test

Test Item	Test Method	Test Instrument	MDL (mg/kg)	EU RoHS Limit (mg/kg)
Lead (Pb)	IEC 62321-5:2013	ICP-OES	2	1000
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	2	100
Mercury (Hg)	IEC 62321-4:2013 +AMD1:2017	ICP-OES	2	1000
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 (non-metal)	UV-Vis	8	1000
	IEC 62321-7-1:2015 (metal)	UV-Vis	0.1($\mu\text{g}/\text{cm}^2$)	1000
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	5	1000
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	5	1000
Phthalates(DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS	50	1000

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Tested Material Description

No.	Description	No.	Description
1	Orange red coating of cigarette rod	16	Gray green atomizing core
2	Silvery metal cigarette rod	17	Green separator of battery
3	Grey black plastic pod	18	Red separator of battery
4	Colorless transparent plastic base	19	Chip LED light
5	Orange red plastic base	20	Microphone solder point
6	White silicone stopper of cigarette mouth	21	Microphone
7	White silicone cover for cigarette rod base	22	Blue wire sheath of connecting wire
8	Black plastic inner frame of cigarette rod	23	Black wire sheath of connecting wire
9	Copper-colored metal contact pin of inner frame	24	Red wire sheath of connecting wire
10	White silicone ring of cigarette rod inner frame	25	Silvery metal core of connecting wire
11	White silicone cover of atomizer	26	Electrode solder point
12	Black plastic base of atomizer	27	Battery electrode sheet
13	White cotton pad of cigarette rod inner frame	28	Brown transparent glue of battery
14	White silicone base of cigarette rod	29	Light yellow smoke oil
15	White silicone base of atomizer		

Tested Differential Material Description

No.	Description	No.	Description
30	Purple coating of cigarette rod	33	Orange yellow coating of cigarette rod
31	Pink coating of cigarette rod	34	Orange green coating of cigarette rod
32	Orange coating of cigarette rod		



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Tested Result (1) Screening Result

Tested Item(s)	Screening Result									
	1	2	3	4	5	6	7	8	9	10
Lead (Pb)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Cadmium (Cd)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Mercury (Hg)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Chromium (Cr(VI))	BL	X	BL	BL	BL	BL	BL	BL	BL	BL
Total Bromine (PBBs & PBDEs)	BL	N/A	BL	BL	BL	BL	BL	BL	N/A	BL
Dibutyl phthalate(DBP)	BL	N/A	BL	BL	BL	BL	BL	BL	N/A	BL
Benzylbutyl phthalate(BBP)	BL	N/A	BL	BL	BL	BL	BL	BL	N/A	BL
Di-2-ethylhexyl phthalate(DEHP)	BL	N/A	BL	BL	BL	BL	BL	BL	N/A	BL
Diisobutyl phthalate(DIBP)	BL	N/A	BL	BL	BL	BL	BL	BL	N/A	BL

Tested Item(s)	Screening Result									
	11	12	13	14	15	16	17	18	19	20
Lead (Pb)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Cadmium (Cd)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Mercury (Hg)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Chromium (Cr(VI))	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Bromine (PBBs & PBDEs)	BL	BL	BL	BL	BL	BL	BL	BL	BL	N/A
Dibutyl phthalate(DBP)	BL	BL	BL	BL	BL	BL	BL	BL	BL	N/A
Benzylbutyl phthalate(BBP)	BL	BL	BL	BL	BL	BL	BL	BL	BL	N/A
Di-2-ethylhexyl phthalate(DEHP)	BL	BL	BL	BL	BL	BL	BL	BL	BL	N/A
Diisobutyl phthalate(DIBP)	BL	BL	BL	BL	BL	BL	BL	BL	BL	N/A

Tested Item(s)	Screening Result									
	21	22	23	24	25	26	27	28	29	30
Lead (Pb)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Cadmium (Cd)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Mercury (Hg)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Chromium (Cr(VI))	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Bromine (PBBs & PBDEs)	N/A	BL	BL	BL	N/A	N/A	N/A	BL	BL	BL
Dibutyl phthalate(DBP)	N/A	BL	BL	BL	N/A	N/A	N/A	BL	BL	BL
Benzylbutyl phthalate(BBP)	N/A	BL	BL	BL	N/A	N/A	N/A	BL	BL	BL
Di-2-ethylhexyl phthalate(DEHP)	N/A	BL	BL	BL	N/A	N/A	N/A	BL	BL	BL
Diisobutyl phthalate(DIBP)	N/A	BL	BL	BL	N/A	N/A	N/A	BL	BL	BL

Shenzhen Alpha Product Testing Co., Ltd.

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(1) Screening Result

Tested Item(s)	Screening Result			
	31	32	33	34
Lead (Pb)	BL	BL	BL	BL
Cadmium (Cd)	BL	BL	BL	BL
Mercury (Hg)	BL	BL	BL	BL
Total Chromium (Cr(VI))	BL	BL	BL	BL
Total Bromine (PBBs & PBDEs)	BL	BL	BL	BL
Dibutyl phthalate(DBP)	BL	BL	BL	BL
Benzylbutyl phthalate(BBP)	BL	BL	BL	BL
Di-2-ethylhexyl phthalate(DEHP)	BL	BL	BL	BL
Diisobutyl phthalate(DIBP)	BL	BL	BL	BL

(2) Test result for Chemical Confirmation

(a) The test result of Hexavalent Chromium (Cr(VI)):

Testing item	Result (mg/kg)
	2
Hexavalent Chromium (Cr(VI))	N.D

Remark: N.D = Not Detected (< MDL or LOQ), MDL = Method Detection Limit
IN= Inconclusive, Further chemical test, X = The range of needing to do further testing
BL = Below the screening limit, OL = Over the screening limit.
N/A= Not applicable
3 σ = The reproducibility of analytical instruments
* = The screened result was found and further chemical test
When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br exclusively.
When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.
LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 $\mu\text{g}/\text{cm}^2$
LOD= Detection limit
mg/kg = ppm = parts per million, 1000 mg/kg = 0.1%



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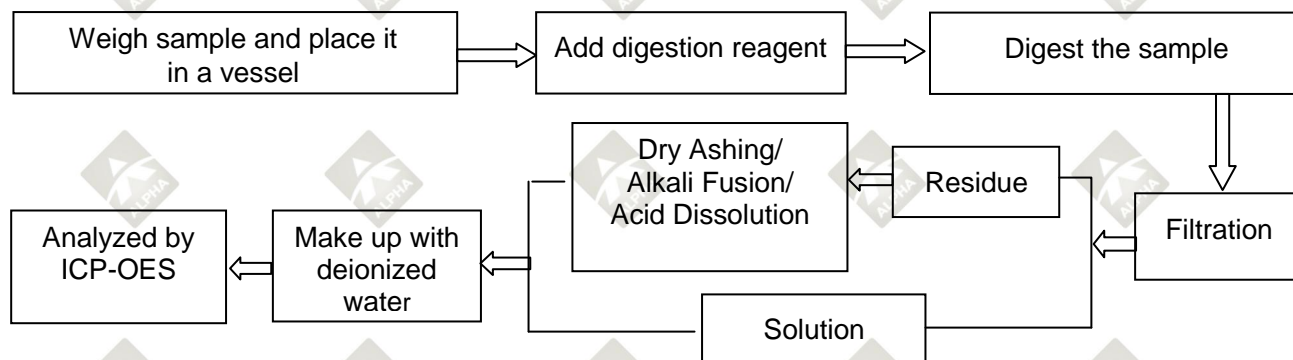
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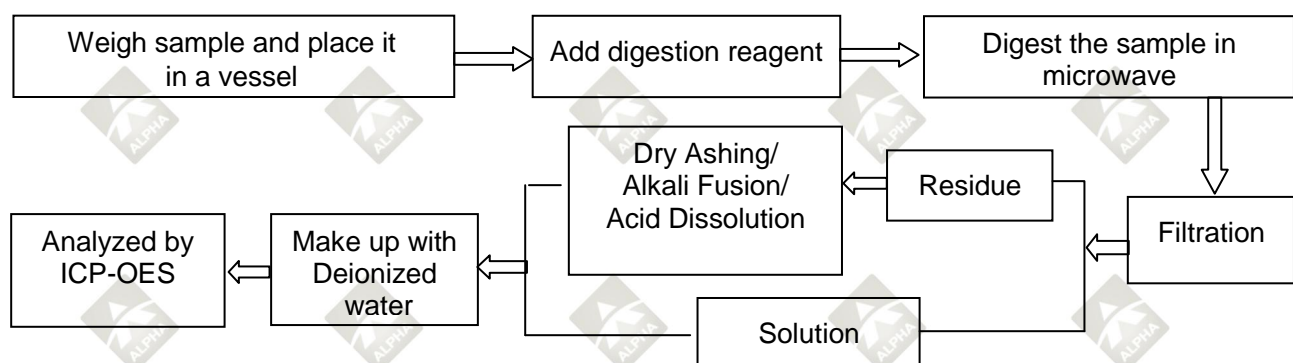
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Test Process

1. Lead(Pb), Cadmium(Cd), Chromium(Cr)

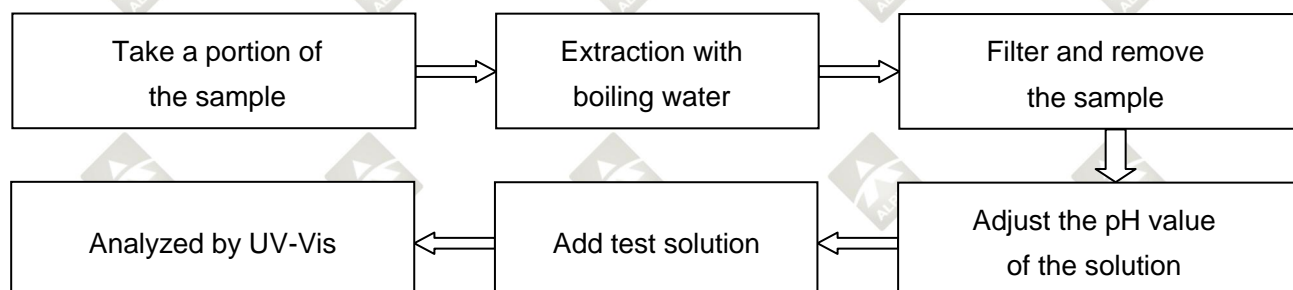


2. Mercury(Hg)



3. Hexavalent Chromium (Cr (VI))

(1) IEC 62321-7-1:2015 Plating/Metal sample(s)





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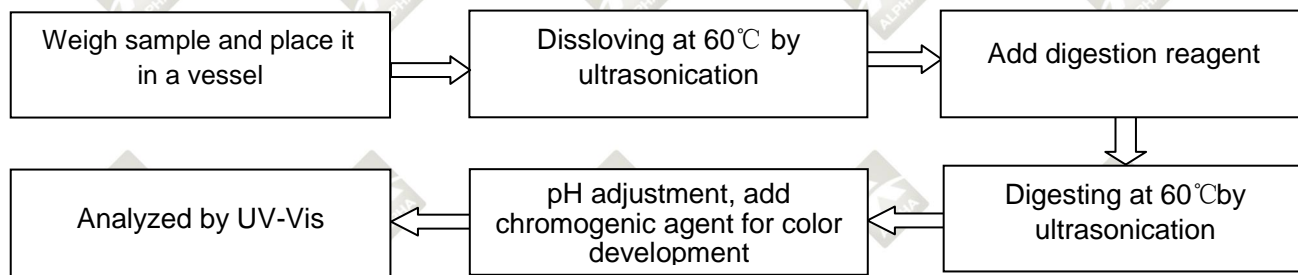
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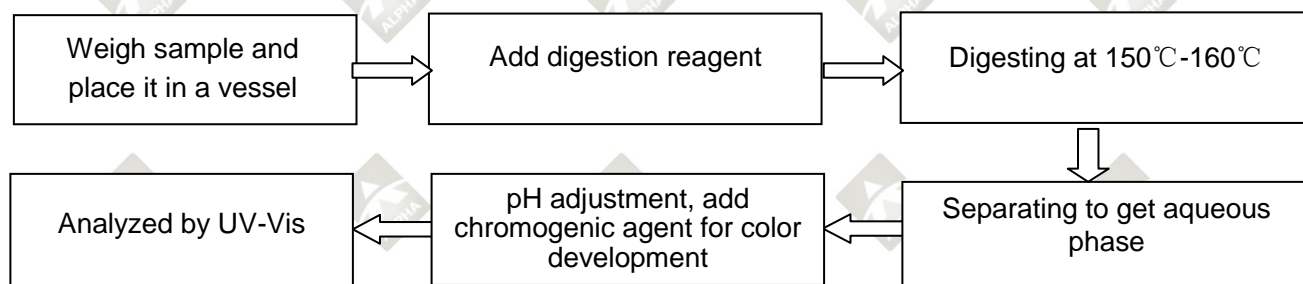
(2) IEC 62321-7-2:2017

Non-metal sample(s) (Material ABS/PC/PVC)

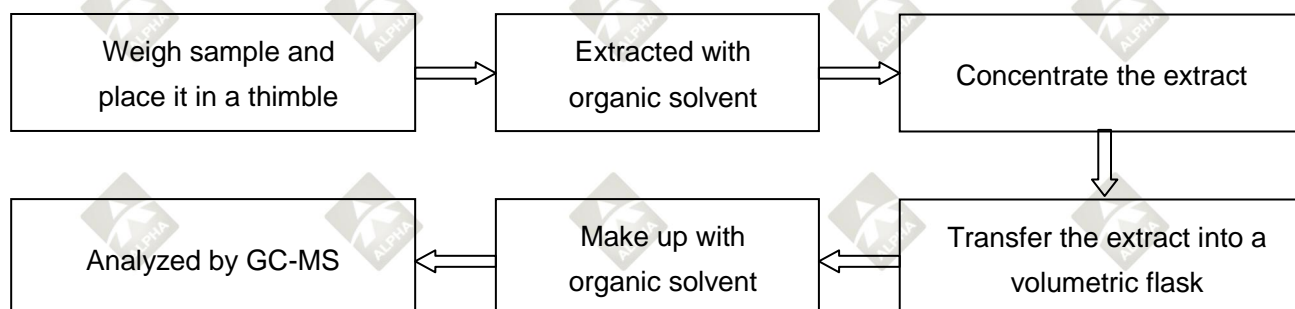


(3) IEC 62321-7-2:2017

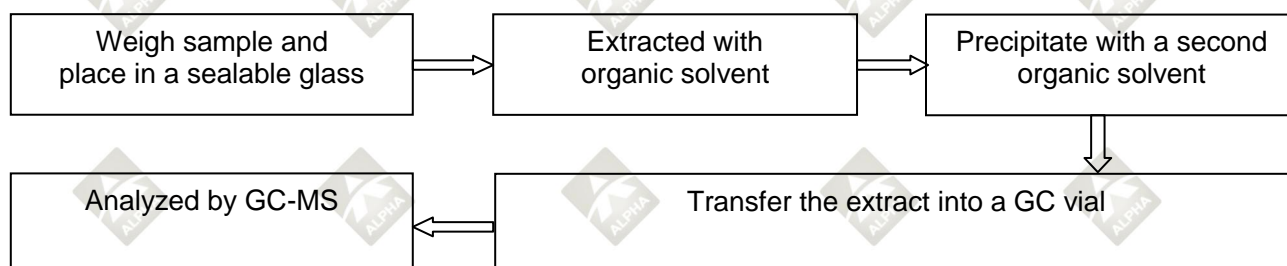
Non-metal sample(s) (Others)



4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



5. Phthalates(DBP/BBP/DEHP/DIBP)



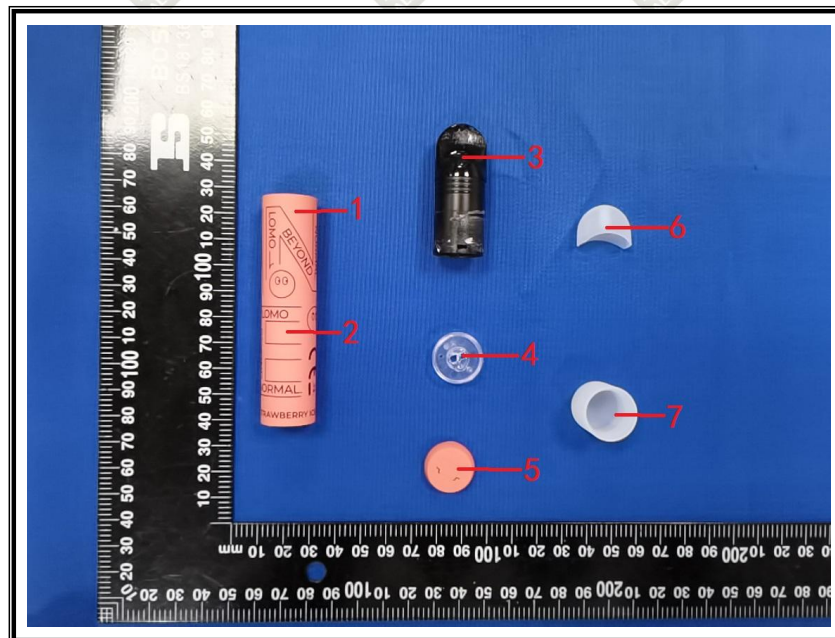
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Tested sample photo(s)



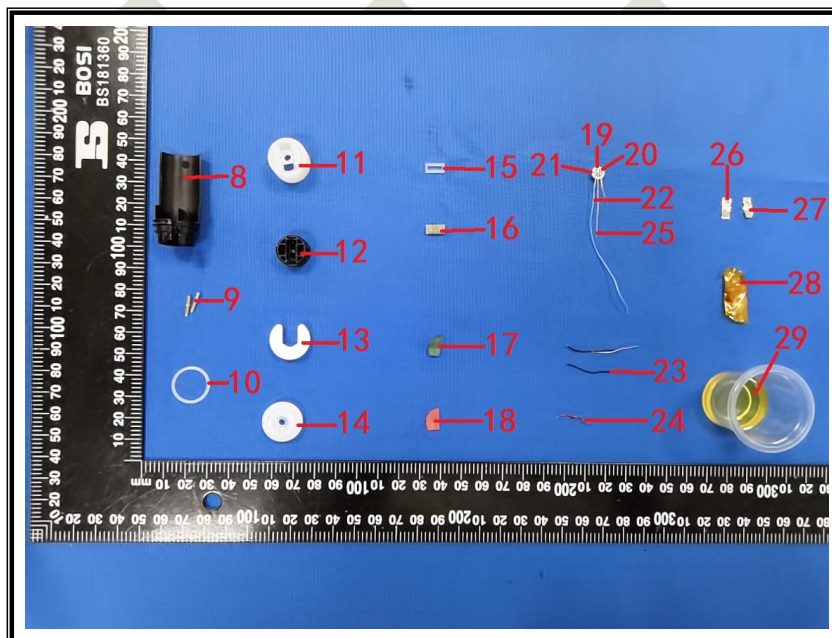
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Tested sample photo(s)



--- End of report ---

Statement:

1. The sample(s) and sample Information was/were provided by the client who should be responsible for the authenticity which ALPHA hasn't verified.
2. The result(s) shown in this report refer(s) only to the sample(s) tested.
3. Without written approval of ALPHA, this report can't be reproduced except in full.
4. Decision rules for the conclusion of this test report: decision by actual test data without considering measurement uncertainty.

Shenzhen Alpha Product Testing Co., Ltd.

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