



Test Report

Report No: KEYS24022620001RH-03

Date: Mar. 1, 2024

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Applicant : Wenzhou Lansheng Electronic Technology Co., Ltd.
Address : Intersection of Youli Village and 104 National Highway in Wanquan Town, Pingyang County, Wenzhou City, Zhejiang Province

The following sample(s) was /were submitted and identified on behalf of the clients as:

Sample Name : Makeup Brush Dryer Machine
Sample Model : LS-125
Sample Received Date : Feb. 25, 2024
Testing Period : Feb. 25, 2024 To Mar. 1, 2024
Test Requested : Selected test (s) in the selected parts as requested by client with the RoHS 2 Directive 2011/65/EU Annex II (EU) 2015/863 as last amended by Directive (EU) 2017/2102.
Test Method : 1. As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.
2. As specified by client, when screening results exceed the XRF screening limit in IEC 62321-3-1: 2013, further use of wet chemical methods are required to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutylphthalate (DBP), and Diisobutyl phthalate (DIBP) in the submitted sample(s).
Test Result : Please refer to next page(s).
Conclusion : PASS (Based on test results)

Signed for and on behalf of



Tony Qian/Approved Signatory

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Summary of Test Results:

TEST REQUEST	CONCLUSION
RoHS Directive 2011/65/EU and its subsequent amendments Directive (EU) 2015/863	--
(1)To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)),Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)content by screening test and chemical test	PASS
(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test	PASS



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Sample Description:

No.	Name
1	Pink Plastic Case
2	White Plastic Case
3	Grey Plastic Bottom
4	Grey Plastic
5	Decal
6	Black Plastic
7	Silicon Steel Sheet
8	Black Plastic
9	Gold Enamelled Wire
10	Golden Metal
11	Black Plastic Fan
12	Magnet
13	Silver Metal
14	Pink Plastic
15	Red Leather
16	Black Leather
17	Wire Core
18	White Connector
19	Terminal

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No.	Name
20	White Leather
21	White Connector
22	Terminal
23	Red Leather
24	Black Leather
25	Wire Core
26	White Connector
27	Terminal
28	Screw
29	Silver Metal
30	Yellow Sticker
31	USB-C Silver Metal Plug
32	White Plastic
33	USB-A Silver Metal Plug
34	Goldfinger
35	White Plastic
36	PCB
37	Nixie Tube
38	Switch
39	White Plastic

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No.	Name
40	Inserting Pin
41	IC
42	Resistance
43	Capacitance
44	Triode
45	Diode
46	PCB
47	USB-C Silver Metal Port
48	Resistance
49	PCB
50	IC
51	White Outer Leather
52	White Leather
53	Pink Leather
54	Soldering Tin
55	Soldering Tin
56	Soldering Tin

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1. XRF Test Result:

No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
1	BL	BL	BL	BL	BL	--	Pass
2	BL	BL	BL	BL	BL	--	Pass
3	BL	BL	BL	BL	BL	--	Pass
4	BL	BL	BL	BL	BL	--	Pass
5	BL	BL	BL	BL	BL	--	Pass
6	BL	BL	BL	BL	BL	--	Pass
7	BL	BL	BL	BL	--	--	Pass
8	BL	BL	BL	BL	BL	--	Pass
9	BL	BL	BL	BL	--	--	Pass
10	BL	BL	BL	BL	--	--	Pass
11	BL	BL	BL	BL	BL	--	Pass
12	BL	BL	BL	BL	--	--	Pass
13	BL	BL	BL	BL	--	--	Pass
14	BL	BL	BL	BL	BL	--	Pass
15	BL	BL	BL	BL	BL	--	Pass
16	BL	BL	BL	BL	BL	--	Pass
17	BL	BL	BL	BL	--	--	Pass
18	BL	BL	BL	BL	BL	--	Pass

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No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
19	BL	BL	BL	BL	--	--	Pass
20	BL	BL	BL	BL	BL	--	Pass
21	BL	BL	BL	BL	BL	--	Pass
22	BL	BL	BL	BL	--	--	Pass
23	BL	BL	BL	BL	BL	--	Pass
24	BL	BL	BL	BL	BL	--	Pass
25	BL	BL	BL	BL	--	--	Pass
26	BL	BL	BL	BL	BL	--	Pass
27	BL	BL	BL	BL	--	--	Pass
28	BL	BL	BL	BL	--	--	Pass
29	BL	BL	BL	BL	--	--	Pass
30	BL	BL	BL	BL	BL	--	Pass
31	BL	BL	BL	BL	--	--	Pass
32	BL	BL	BL	BL	BL	--	Pass
33	BL	BL	BL	BL	--	--	Pass
34	BL	BL	BL	BL	--	--	Pass
35	BL	BL	BL	BL	BL	--	Pass
36	BL	BL	BL	BL	BL	--	Pass
37	BL	BL	BL	BL	BL	--	Pass

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No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
38	BL	BL	BL	BL	--	--	Pass
39	BL	BL	BL	BL	BL	--	Pass
40	BL	BL	BL	BL	--	--	Pass
41	BL	BL	BL	BL	--	--	Pass
42	BL	BL	BL	BL	--	--	Pass
43	BL	BL	BL	BL	--	--	Pass
44	BL	BL	BL	BL	--	--	Pass
45	BL	BL	BL	BL	--	--	Pass
46	BL	BL	BL	BL	BL	--	Pass
47	BL	BL	BL	BL	--	--	Pass
48	BL	BL	BL	BL	--	--	Pass
49	BL	BL	BL	BL	BL	--	Pass
50	BL	BL	BL	BL	--	--	Pass
51	BL	BL	BL	BL	BL	--	Pass
52	BL	BL	BL	BL	BL	--	Pass
53	BL	BL	BL	BL	BL	--	Pass
54	BL	BL	BL	BL	--	--	Pass
55	BL	BL	BL	BL	--	--	Pass
56	BL	BL	BL	BL	--	--	Pass

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Remark:

1. It is the result on total Br while test item on restricted substances in PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).

2. Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1: 2013 Annex A.

Element	Polymer Material	Metallic Material	Composite Material
Pb	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma \leq X < 1500 + 3\sigma \leq OL$
Cd	$BL \leq 70 - 3\sigma \leq X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma \leq X < 130 + 3\sigma \leq OL$	$LOD < X < 150 + 3\sigma \leq OL$
Hg	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma \leq X < 1500 + 3\sigma \leq OL$
Cr	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

XRF detection limits in mg/kg for regulated elements in various material

Element	Polymer Material	Metallic Material	Composite Material
Pb	10	50	50
Cd	10	50	50
Hg	10	50	50
Cr	10	50	50
Br	10	50	50

- Note:**
- BL = Under the XRF screening limit
 - OL = Future chemical test will be conducted while result is above the screening limit
 - X = The symbol "X" marks the region where further investigation is necessary
 - 3σ = The reproducibility of analytical instruments
 - LOD = Detection limit

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2. Wet Chemical Test

Test Item(s)	Test Method/ Test Equipment	Unit	Limit	MDL
Cadmium(Cd)	IEC 62321-5:2013, ICP-OES	mg/kg	100	2
Lead(Pb)	IEC 62321-5:2013, ICP-OES	mg/kg	1000	2
Mercury(Hg)	IEC 62321-4:2013+AMD1:2017, ICP-OES	mg/kg	1000	2
Hexavalent Chromium(CrVI) (Metal)	IEC 62321-7-1:2015, UV-Vis	µg/cm ²	0.13	0.1
Hexavalent Chromium(CrVI) (Nonmetal)	IEC 62321-7-2:2017, UV-Vis	mg/kg	1000	8
PBBs (Next form)	IEC 62321-6:2015, GC-MS	mg/kg	1000	5
PBDEs (Next form)	IEC 62321-6:2015, GC-MS	mg/kg	1000	5
Dibutyl Phthalate(DBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Butyl benzyl phthalate (BBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Di-(2-ethylhexyl) Phthalate(DEHP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Diisobutyl phthalate (DIBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30

PBBs		PBDEs	
Monobromobiphenyl	Hexabromobiphenyl	Monobromodiphenyl ether	Hexabromodiphenyl ether
Dibromobiphenyl	Heptabromobiphenyl	Dibromodiphenyl ether	Heptabromodiphenyl ether
Tribromobiphenyl	Octabromobiphenyl	Tribromodiphenyl ether	Octabromodiphenyl ether
Tetrabromobiphenyl	Nonabromobiphenyl	Tetrabromodiphenyl ether	Nonabromodiphenyl ether
Pentabromobiphenyl	Decabromobiphenyl	Pentabromodiphenyl ether	Decabromodiphenyl ether

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- Note:**
1. mg/kg= ppm=0.0001%
 2. N.D.= Not Detected(<MDL)
 3. MDL = Method Detection Limit
 4. -- = No Testing
 5. When Cr (VI) in a sample is detected below the 0.10 $\mu\text{g}/\text{cm}^2$ LOQ (limit of quantification), the sample is considered to be negative for Cr (VI). Since Cr (VI) may not be uniformly distributed in the coating even within the same sample batch, a "grey zone" between 0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$ has been established as "inconclusive" to reduce inconsistent results due to unavoidable coating variations. In this case, additional testing may be necessary to confirm the presence of Cr (VI). When Cr (VI) is detected above 0.13 $\mu\text{g}/\text{cm}^2$, the sample is considered to be positive for the presence of Cr (VI) in the coating layer. Unavoidable coating variations may influence the determination. Information on storage conditions and production date of the tested sample is unavailable and thus Cr (VI) results represent status of the sample at the time of testing.



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3. Phthalate Test Result:

Test Item(s)	No.1	No.2	No.3	No.4	No.5
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item(s)	No.6	No.8	No.11	No.14	No.15
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item(s)	No.16	No.18	No.20	No.21	No.23
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item(s)	No.24	No.26	No.30	No.32	No.35
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item(s)	No.36	No.37	No.39	No.46	No.49
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.

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Test Item(s)	No.51	No.52	No.53	--	--
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	--	--
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	--	--
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	--	--
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	--	--

Note: 1. mg/kg= ppm=0.0001%

2. N.D.= Not Detected(<MDL)



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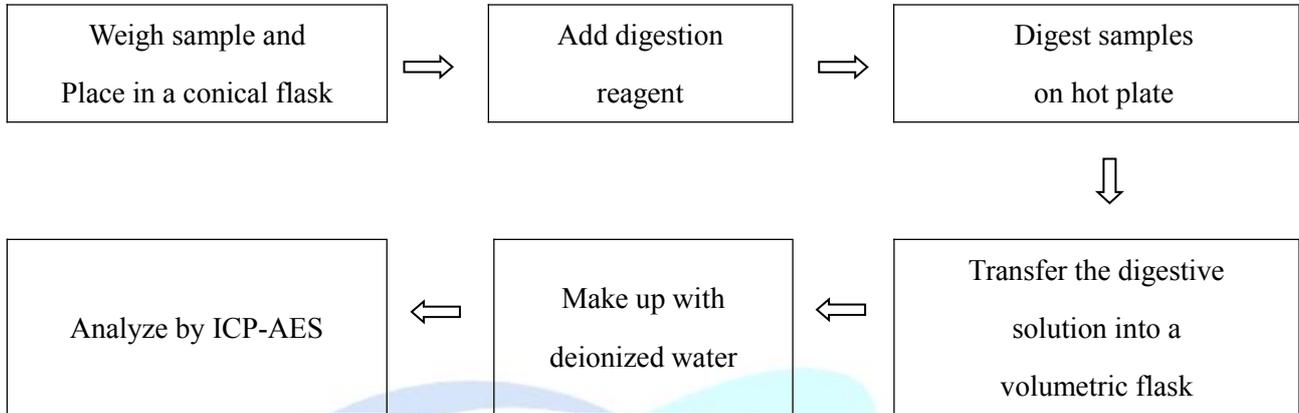
Guangdong KEYS Testing Technology Co., Ltd.

Address: Building 1, No.18, Shihuan Road, Dongcheng Subdistrict, Dongguan, Guangdong, China

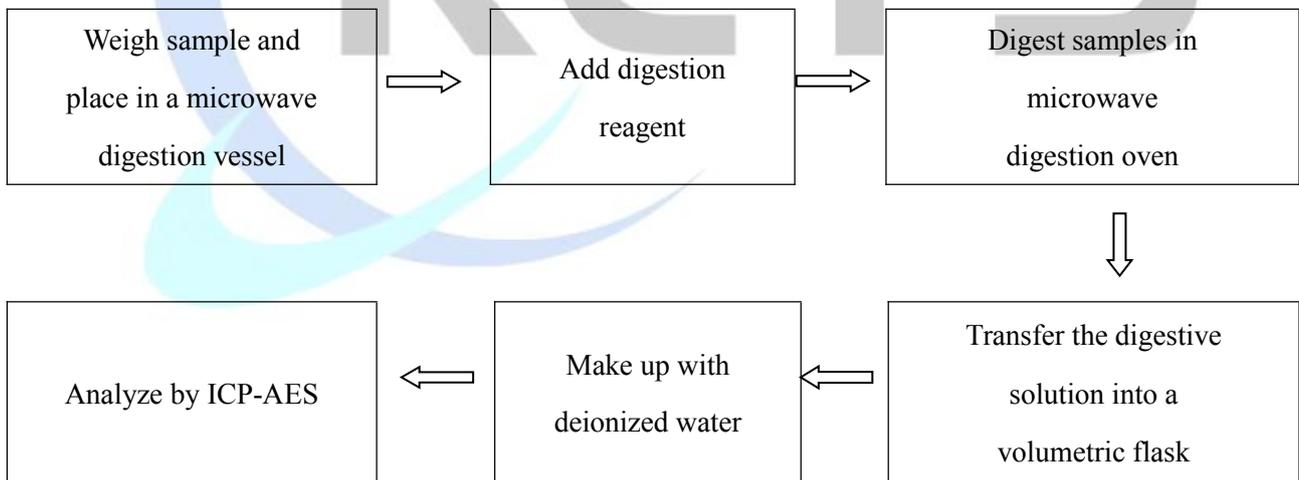
Tel:+86-0769-89798319 <http://www.keys-lab.com> E-mail: info@keys-lab.com

Test Process:

1. Test for Cd/Pb Content



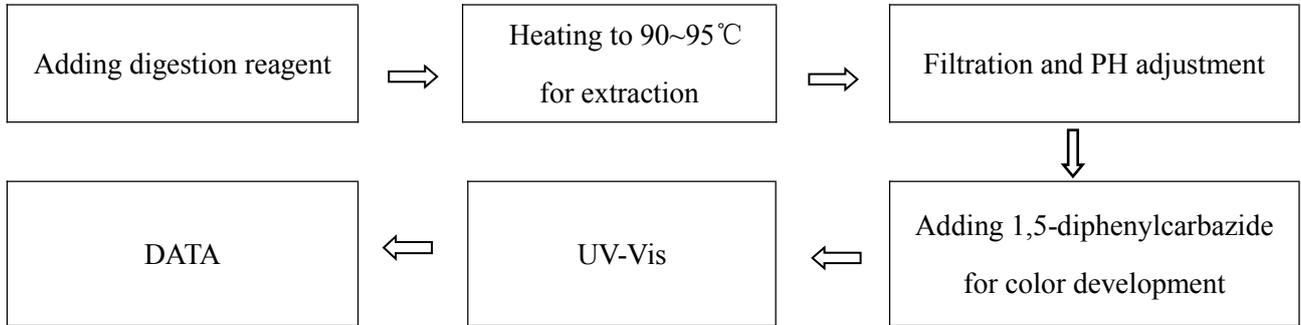
2. Test for Hg Content



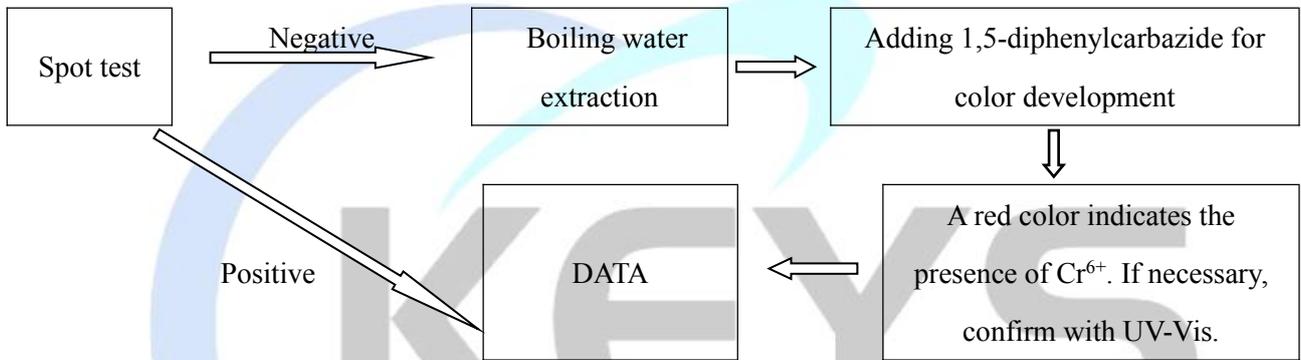
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3. Test for Chromium (VI) Content

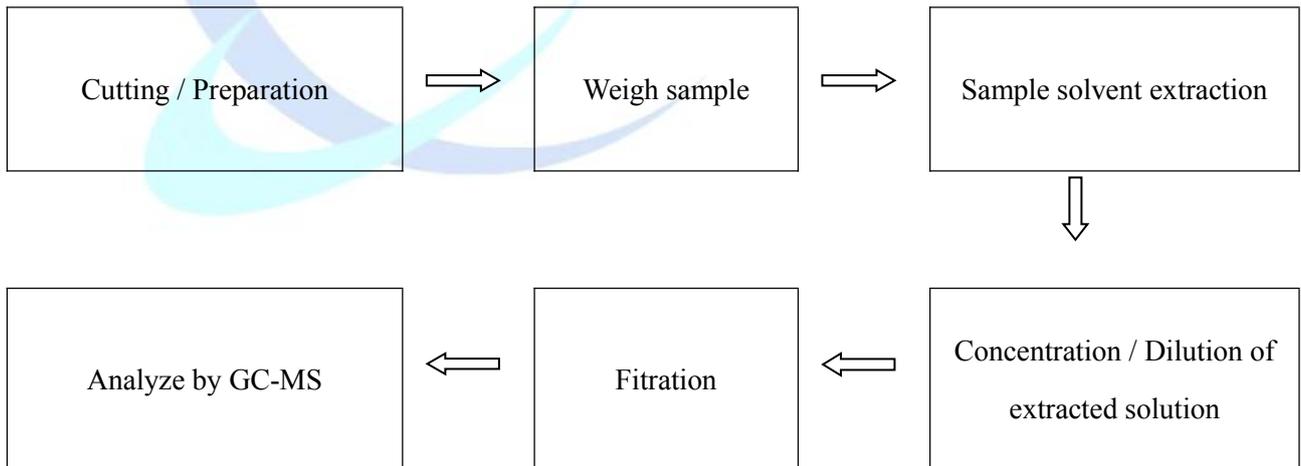
Nonmetal material



Metal material

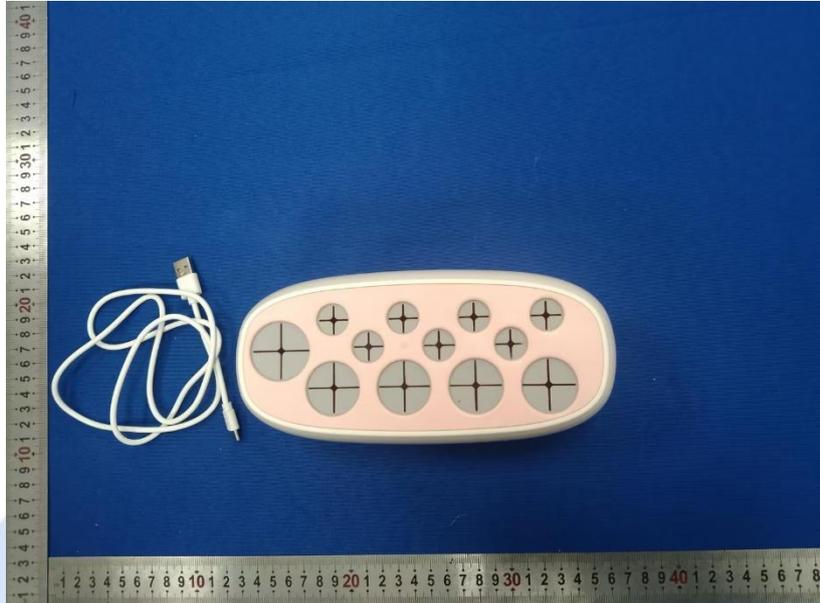


4. Test for DBP, BBP, DEHP, DIBP, PBB, PBDE Content



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Sample Photo:



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