Test Report

Applicant: Mid Ocean Brands B.V.

Address: Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Manufacturer: 117486

Address: N/A

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

Sample Name: Fan

Sample Model: MO2780

Sample Received Date: Dec. 31, 2025 & Jan. 15, 2026

Testing Period: Dec. 31, 2025 to Jan. 21, 2026

Test Requested

As requested by the applicant, refer to attached page(s) for details.

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Approved by:

Johnny Chen/Technical Manager

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Test Report

Summary of Test Results:

Test Standard		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

Test Report

Test Results:

(1)XRF Test Result:

No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
1	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	--	--	Pass
9	BL	BL	BL	BL	--	--	Pass
10	BL	BL	BL	BL	--	--	Pass
11	BL	BL	BL	BL	--	--	Pass
12	BL	BL	BL	X	--	CrVI: Negative	Pass
13	BL	BL	BL	BL	--	--	Pass
14	BL	BL	BL	X	--	CrVI: Negative	Pass
15	BL	BL	BL	BL	BL	--	Pass
16	BL	BL	BL	BL	BL	--	Pass
17	BL	BL	BL	BL	BL	--	Pass
18	BL	BL	BL	BL	BL	--	Pass
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	BL	--	Pass
23	BL	BL	BL	BL	BL	--	Pass
24	BL	BL	BL	BL	BL	--	Pass
25	BL	BL	BL	BL	BL	--	Pass

Test Report

No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
26	BL	BL	BL	BL	--	--	Pass
27	BL	BL	BL	BL	BL	--	Pass
28	BL	BL	BL	BL	--	--	Pass
29	BL	BL	BL	BL	BL	--	Pass
30	BL	BL	BL	BL	BL	--	Pass
31	BL	BL	BL	BL	BL	--	Pass
32	BL	BL	BL	BL	--	--	Pass
33	BL	BL	BL	BL	BL	--	Pass
34	BL	BL	BL	BL	BL	--	Pass
35	BL	BL	BL	BL	X	PBBs/PBDEs:N.D.	Pass
36	BL	BL	BL	X	--	CrVI: Negative	Pass
37	BL	BL	BL	BL	BL	--	Pass
38	BL	BL	BL	BL	BL	--	Pass
39	BL	BL	BL	BL	BL	--	Pass
40	BL	BL	BL	BL	BL	--	Pass
41	BL	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	BL	--	Pass
46	BL	BL	BL	BL	--	--	Pass
47	BL	BL	BL	BL	BL	--	Pass
48	BL	BL	BL	BL	BL	--	Pass
49	BL	BL	BL	BL	X	PBBs/PBDEs:N.D.	Pass
50	BL	BL	BL	BL	--	--	Pass
51	BL	BL	BL	BL	BL	--	Pass
52	BL	BL	BL	BL	--	--	Pass

Test Report

No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
53	BL	BL	BL	BL	BL	--	Pass
54	BL	BL	BL	BL	BL	--	Pass
55	BL	BL	BL	BL	--	--	Pass
56	BL	BL	BL	BL	BL	--	Pass
57	BL	BL	BL	BL	BL	--	Pass
58	BL	BL	BL	BL	--	--	Pass
59	BL	BL	BL	BL	--	--	Pass
60	BL	BL	BL	BL	--	--	Pass
61	BL	BL	BL	BL	X	PBBs/PBDEs:N.D.	Pass
62	BL	BL	BL	BL	--	--	Pass
63	BL	BL	BL	X	--	CrVI: Negative	Pass
64	BL	BL	BL	BL	BL	--	Pass
65	BL	BL	BL	BL	--	--	Pass
66	BL	BL	BL	BL	BL	--	Pass
67	BL	BL	BL	BL	--	--	Pass
68	BL	BL	BL	BL	BL	--	Pass
69	BL	BL	BL	BL	BL	--	Pass
70	BL	BL	BL	BL	BL	--	Pass

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: 2013Annex A.

Element	Polymer Material	Metallic Material	Composite Material
Pb	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cd	BL≤70-3σ≤X＜130+3σ≤OL	BL≤70-3σ≤X＜130+3σ≤OL	LOD＜X＜150+3σ≤OL
Hg	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cr	BL≤700-3σ＜X	BL≤700-3σ＜X	BL≤500-3σ＜X
Br	BL≤300-3σ＜X	--	BL≤250-3σ＜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: 1.BL = Under the XRF screening limit

2.OL = Future chemical test will be conducted while result is above the screening limit

3.X =The symbol“X”marks the region where further investigation in necessary

4.3σ=The reproducibility of analytical instruments

5.LOD=Detection limit

(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

Test Item(s)	Test Method/ Test Equipment	Unit	Limit	MDL
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

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 μg/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 μg/cm^2 and 0.13 μg/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 μg/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.

(3)Phthalate Test Result:

Test No.	Test Item(s)				Conclusion
	Dibutyl Phthalate (DBP)	Butyl benzyl phthalate (BBP)	Di-(2-ethylhexyl) Phthalate (DEHP)	Diisobutyl phthalate (DIBP)	
2	N.D.	N.D.	N.D.	N.D.	Pass
3	N.D.	N.D.	N.D.	N.D.	Pass
4	N.D.	N.D.	N.D.	N.D.	Pass
5	N.D.	N.D.	N.D.	N.D.	Pass
6	N.D.	N.D.	N.D.	N.D.	Pass
15	N.D.	N.D.	N.D.	N.D.	Pass
16	N.D.	N.D.	N.D.	N.D.	Pass
17	N.D.	N.D.	N.D.	N.D.	Pass
18	N.D.	N.D.	N.D.	N.D.	Pass
20	N.D.	N.D.	N.D.	N.D.	Pass
21	N.D.	N.D.	N.D.	N.D.	Pass
22	N.D.	N.D.	N.D.	N.D.	Pass
23	N.D.	N.D.	N.D.	N.D.	Pass
24	N.D.	N.D.	N.D.	N.D.	Pass
25	N.D.	N.D.	N.D.	N.D.	Pass
27	N.D.	N.D.	N.D.	N.D.	Pass
29	N.D.	N.D.	N.D.	N.D.	Pass
30	N.D.	N.D.	N.D.	N.D.	Pass
31	N.D.	N.D.	N.D.	N.D.	Pass
33	N.D.	N.D.	N.D.	N.D.	Pass
34	N.D.	N.D.	N.D.	N.D.	Pass
35	N.D.	N.D.	N.D.	N.D.	Pass
37	N.D.	N.D.	N.D.	N.D.	Pass
38	N.D.	N.D.	N.D.	N.D.	Pass
39	N.D.	N.D.	N.D.	N.D.	Pass
40	N.D.	N.D.	N.D.	N.D.	Pass

Test Report

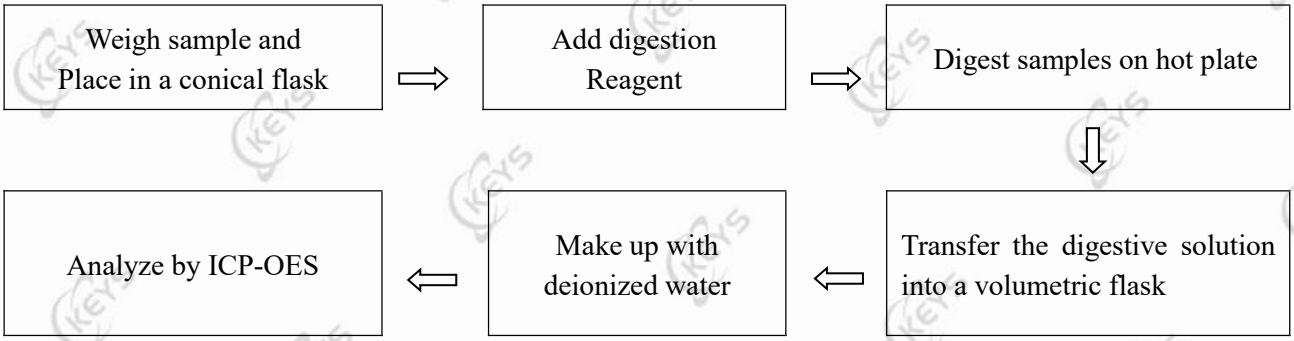
Test No.	Test Item(s)				Conclusion
	Dibutyl Phthalate (DBP)	Butyl benzyl phthalate (BBP)	Di-(2-ethylhexyl) Phthalate (DEHP)	Diisobutyl phthalate (DIBP)	
41	N.D.	N.D.	N.D.	N.D.	Pass
45	N.D.	N.D.	N.D.	N.D.	Pass
47	N.D.	N.D.	N.D.	N.D.	Pass
48	N.D.	N.D.	N.D.	N.D.	Pass
49	N.D.	N.D.	N.D.	N.D.	Pass
51	N.D.	N.D.	N.D.	N.D.	Pass
53	N.D.	N.D.	N.D.	N.D.	Pass
54	N.D.	N.D.	N.D.	N.D.	Pass
56	N.D.	N.D.	N.D.	N.D.	Pass
57	N.D.	N.D.	N.D.	N.D.	Pass
61	N.D.	N.D.	N.D.	N.D.	Pass
64	N.D.	N.D.	N.D.	N.D.	Pass
66	N.D.	N.D.	N.D.	N.D.	Pass
68	N.D.	N.D.	N.D.	N.D.	Pass
69	N.D.	N.D.	N.D.	N.D.	Pass
70	N.D.	N.D.	N.D.	N.D.	Pass

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

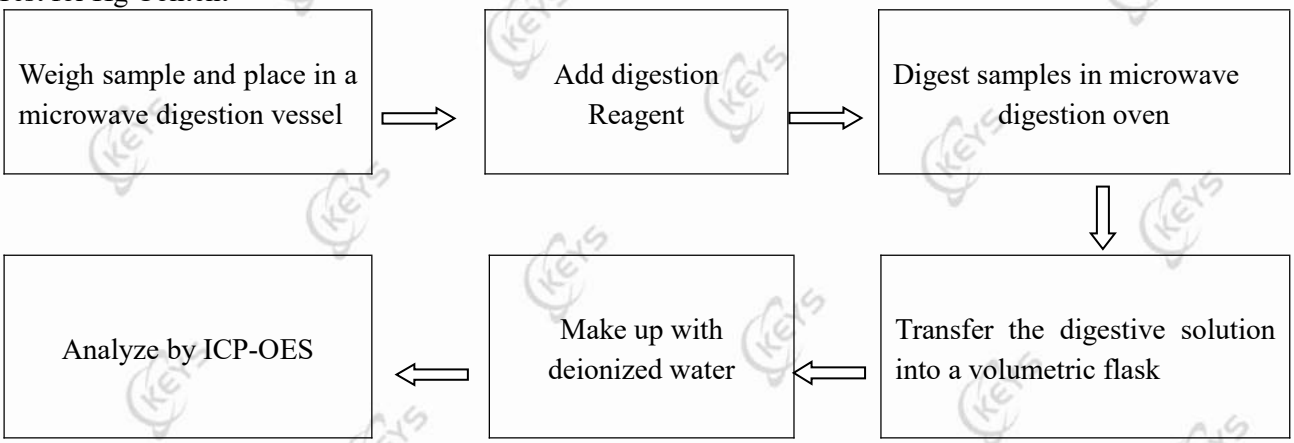
2. N.D.= Not Detected(<MDL)

Test Process:

1. Test for Cd/Pb Content

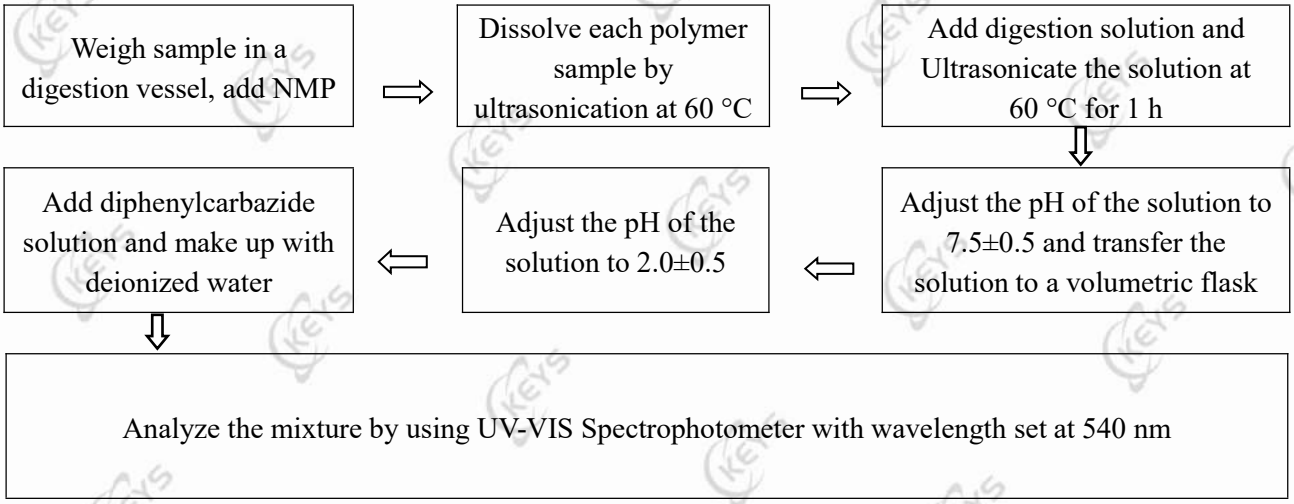


2. Test for Hg Content

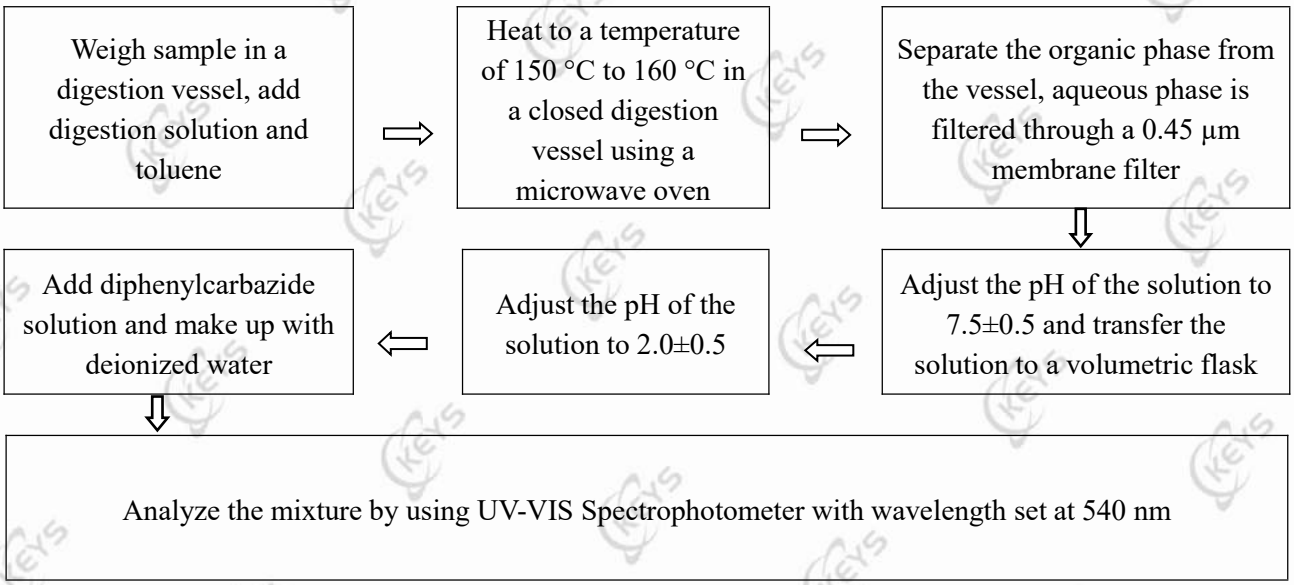


3. Test for Chromium (VI) Content

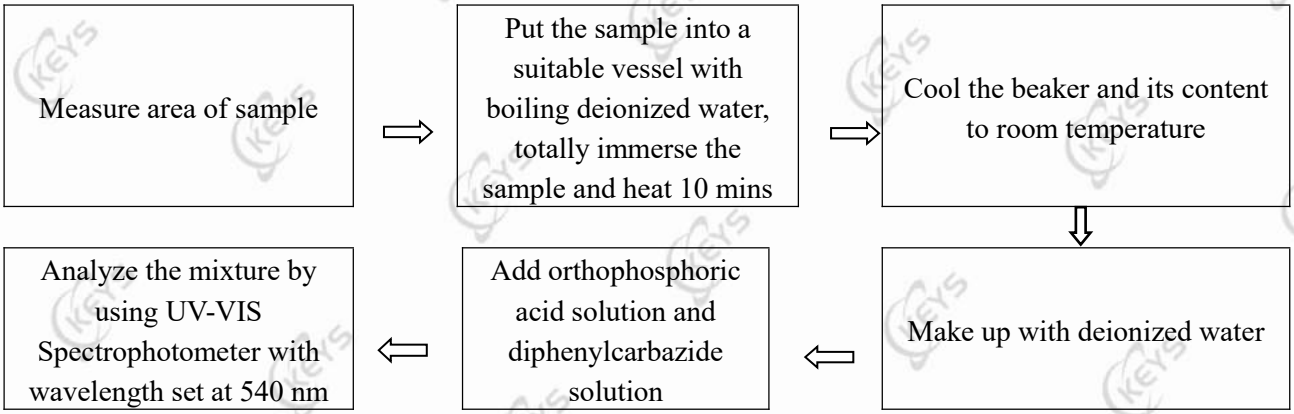
Soluble polymers：



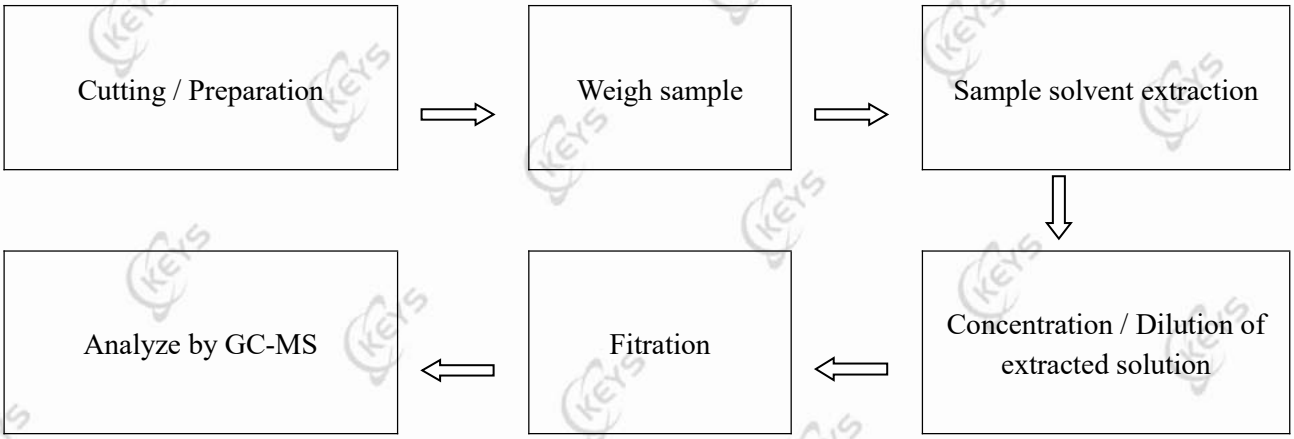
Insoluble/unknown polymers and electronics without Sb



Metal material



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



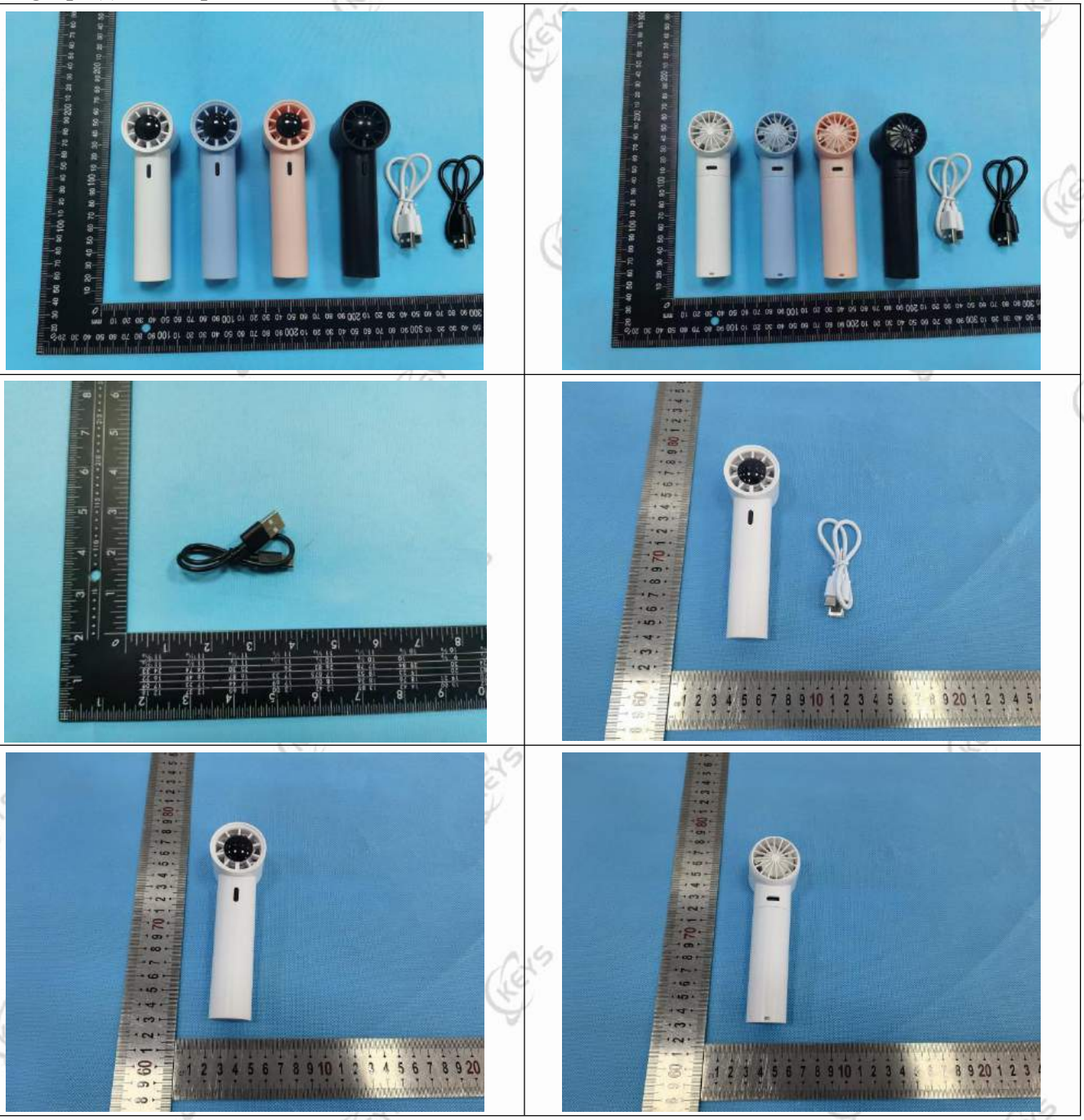
Sample Description:

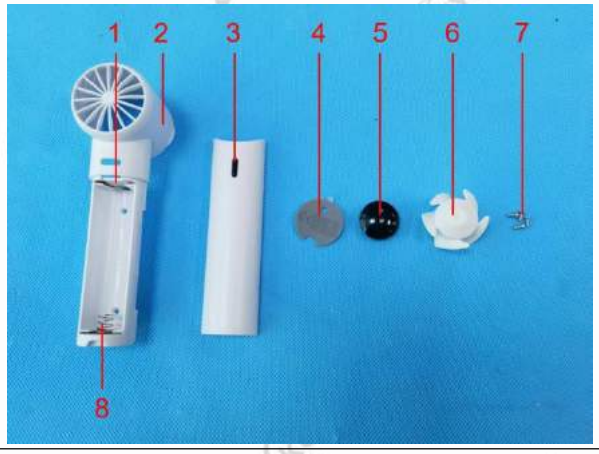
No.	Description
1	Silver metal sheet
2	White plastic casing
3	Black plastic button
4	Gray silicone adhesive gasket
5	Translucent black plastic cap
6	Cream white plastic fan blade
7	Silver metal screw
8	Silver metal spring
9	Silver metal sheet
10	Black magnet
11	Copper-colored metal fixation
12	Silver-colored metal sheet
13	Copper-colored enameled wire
14	Silver-colored metal shaft
15	Black plastic bracket
16	Blue plastic with black printing
17	Black/white/yellow digital tube
18	White plastic wire sheath
19	Copper-colored metal wire core
20	Blue plastic wire sheath
21	White plastic terminal
22	Yellow plastic wire sheath
23	Red plastic wire sheath
24	Black plastic wire sheath
25	White PCB
26	Silver-colored metal solder
27	Black plastic wire sheath

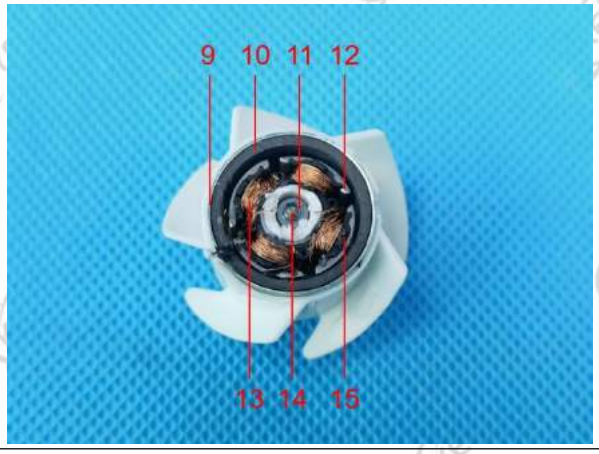
No.	Description
28	Silver-colored metal wire core
29	Red plastic wire sheath
30	Green PCB
31	Black IC
32	Silver metallic solder
33	Black plastic wire sheath
34	Red plastic wire sheath
35	Green PCB
36	Silver metallic connector
37	Black resistor
38	Beige plastic terminal
39	Black IC
40	Black transistor
41	Black plastic switch
42	Silver metallic sheet
43	Silver metallic tab
44	Silver metallic contact
45	Black diode
46	Copper-colored enameled wire
47	Dark gray inductor
48	Black IC
49	Beige plastic terminal
50	Silver metallic contact pin
51	Brown capacitor
52	Silver metallic solder
53	White plastic USB outer cover
54	White plastic inner wire sheath
55	Copper-colored metal wire core

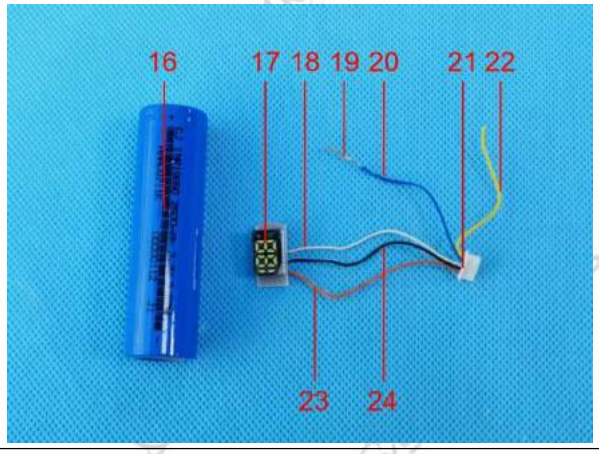
No.	Description
56	Red plastic inner wire sheath
57	White plastic outer wire sheath
58	Silver metallic USB
59	Silver metallic contact pin
60	Silver metallic solder
61	Green PCB
62	Gold metallic contact pin
63	Silver metallic connector
64	White plastic fixation
65	Silver metallic solder
66	Black plastic fixation
67	Silver metallic solder
68	Blue plastic casing
69	Pink plastic casing
70	Black plastic casing

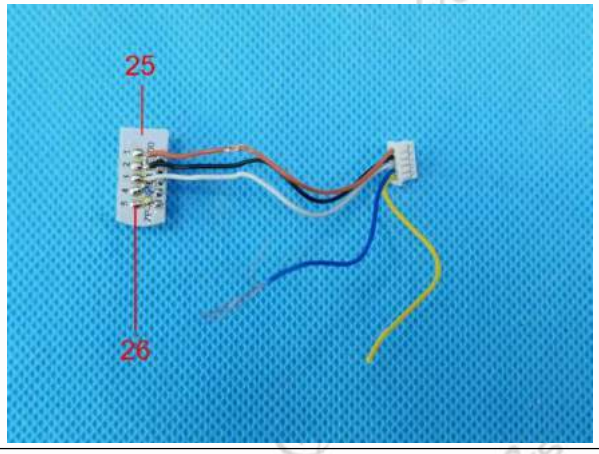
Photograph(s) of Sample：

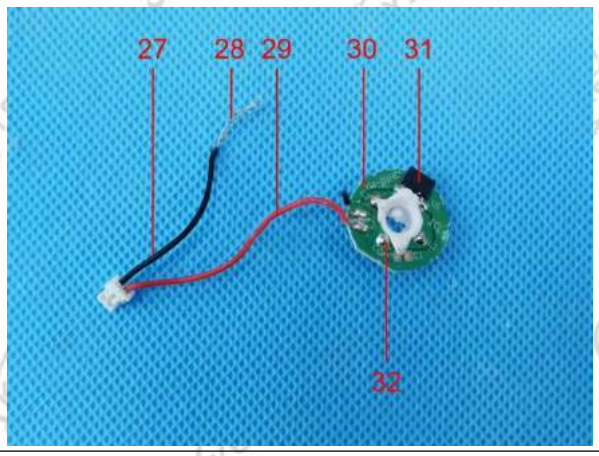


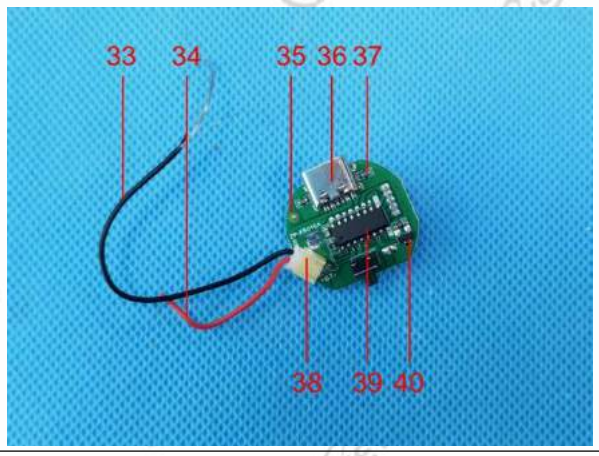


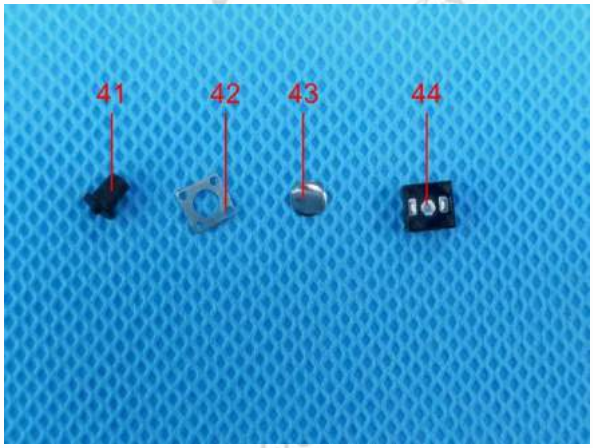


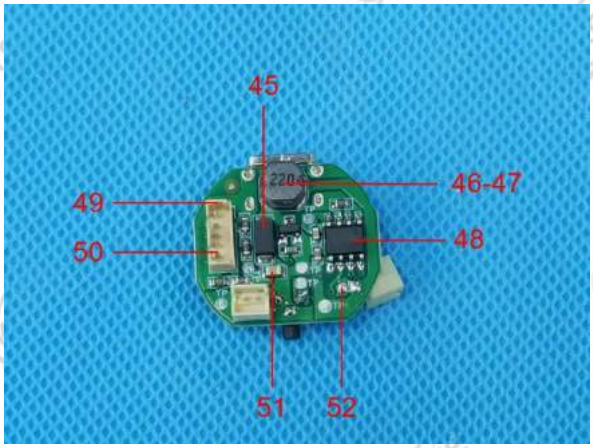


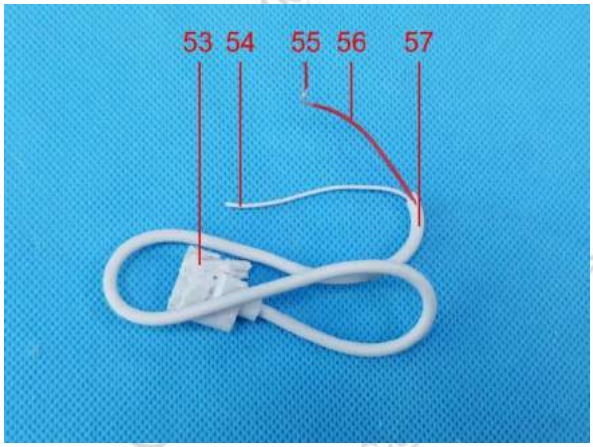


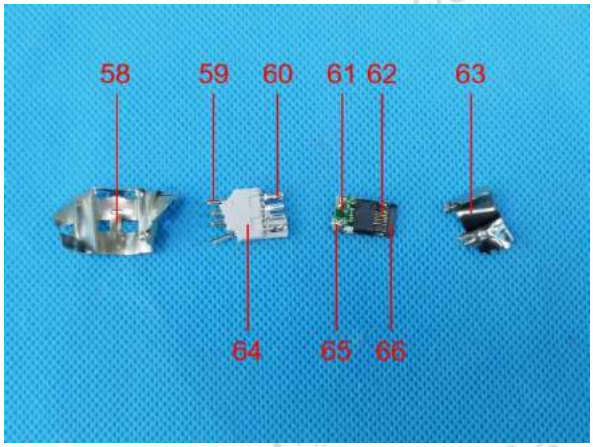


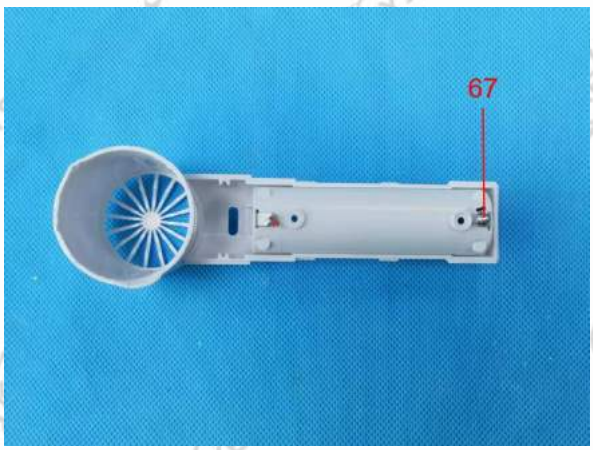












*** End of Report ***