



中国认可  
国际互认  
检测  
TESTING  
CNAS L4595

# Verification Report

Report No.: LCS211209040AR

Date: 2021.12.30

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**Applicant** : Topway EM Enterprise Ltd.  
**Address** : 8F., Block B, Building 6, Baoneng Science and technology park, Qingxiang RD., Qinghu Industrial Park, Longhua New District, Shenzhen, GD, China 518109

## Report on the submitted samples said to be:

**Sample Name(s)** : Kids Wireless Headphones  
**Trade Mark** : N/A  
**Part No.** : 17LY79, GKIDBTB18, GKIDBTP18  
**Sample Received Date** : December 16, 2021  
**Testing Period** : December 16, 2021 ~ December 30, 2021  
**Results** : Please refer to next page(s).

TEST REQUEST	CONCLUSION
As specified by client, based on the performed tests on submitted sample, the result of Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, Dibutyl Phthalate(DBP), Butylbenzyl Phthalate(BBP), Di-2-ethylhexyl Phthalate(DEHP) and Diisobutyl phthalate(DIBP) content comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.	PASS

Signed for and on behalf of LCS

Young/Laboratory Manager



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## Results:

### A. EU RoHS Directive 2011/65/EU and its amendment directives

Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>v</sup>	Br <sup>v</sup>		
						PBBs	PBDEs	
1	Bright light blue plastic shell (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
2	Silver metal screw (head hoop)	BL	BL	BL	BL	/	/	2021-12-16
3	Blue Pu (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
4	Black foam with viscose (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
5	Light blue plastic (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
6	Light blue plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
7	Gold enamelled wire	BL	BL	BL	BL	/	/	2021-12-16
8	Blue enamelled wire	BL	BL	BL	BL	/	/	2021-12-16
9	Cyan enamelled wire	BL	OL	BL	BL	/	/	2021-12-16
10	Blue Gold two-color enamelled wire	BL	OL	BL	BL	/	/	2021-12-16
11	Red enamelled wire	BL	BL	BL	BL	/	/	2021-12-16
12	Blue printing white plastic sheet	BL	BL	BL	BL	BL	BL	2021-12-16
13	Blue plastic shell	BL	BL	BL	BL	BL	BL	2021-12-16
14	Light blue Pu	BL	BL	BL	BL	BL	BL	2021-12-16
15	Beige foam	BL	BL	BL	BL	BL	BL	2021-12-16
16	White soft plastic	BL	BL	BL	BL	BL	BL	2021-12-16/ 2021-12-28
17	White mesh	BL	BL	BL	BL	BL	BL	2021-12-16
18	Black plastic bottom shell	BL	BL	BL	BL	BL	BL	2021-12-16
19	Silver metal screw	BL	BL	BL	BL	/	/	2021-12-16
20	Black plastic skin	BL	BL	BL	BL	BL	BL	2021-12-16
21	Black plastic shell (horn)	BL	BL	BL	BL	BL	BL	2021-12-16
22	Transparent plastic film (horn)	BL	BL	BL	BL	BL	BL	2021-12-16
23	Copper coil (horn)	OL	OL	BL	X	/	/	2021-12-16
24	Silver metal shell (horn)	OL	BL	BL	BL	/	/	2021-12-16



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Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
25	Silver metal sheet (horn)	OL	BL	BL	BL	/	/	2021-12-16
26	Gray black metal magnet (horn)	BL	OL	BL	X	/	/	2021-12-16
27	Green PCB (horn)	BL	BL	BL	BL	X	X	2021-12-16
28	Solder joint (horn)	BL	BL	BL	BL	/	/	2021-12-16
29	Black foam viscose	BL	BL	BL	BL	BL	BL	2021-12-16
30	Transparent yellow tape	BL	BL	BL	BL	BL	BL	2021-12-16
31	Silver battery body	BL	BL	BL	BL	BL	BL	2021-12-16
32	Black body IC	BL	BL	BL	BL	BL	BL	2021-12-16
33	Black plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
34	Yellow plastic thread cover	BL	BL	BL	BL	BL	BL	2021-12-16
35	Red plastic thread skin	BL	BL	BL	BL	BL	BL	2021-12-16
36	Silver wire	BL	BL	BL	BL	/	/	2021-12-16
37	Silver metal contact	BL	BL	BL	BL	/	/	2021-12-16
38	Green PCB	BL	BL	BL	BL	X	X	2021-12-16
39	Solder joint	BL	BL	BL	BL	/	/	2021-12-16
40	Silver metal screw with black plating	BL	BL	BL	BL	/	/	2021-12-16
41	Black plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
42	White dry glue	BL	BL	BL	BL	BL	BL	2021-12-16
43	Silver metal body (Y1)	OL	X	BL	X	/	/	2021-12-16
44	Black soft plastic cover (earpiece)	BL	BL	BL	BL	BL	BL	2021-12-16
45	Gold metal shell (earpiece)	BL	BL	BL	BL	/	/	2021-12-16
46	Silver metal sheet (earpiece)	X	BL	BL	BL	/	/	2021-12-16
47	Silver metal ring (earpiece)	OL	BL	BL	BL	/	/	2021-12-16
48	Green PCB with gold metal edge (earpiece)	BL	BL	BL	BL	X	X	2021-12-16
49	Black plastic wire cover (earpiece)	BL	BL	BL	BL	BL	BL	2021-12-16
50	Red plastic wire cover (earpiece)	BL	BL	BL	BL	BL	BL	2021-12-16



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Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
51	Silver wire (earpiece)	BL	OL	BL	BL	/	/	2021-12-16
52	Black plastic case (headphone connector)	BL	BL	BL	BL	BL	BL	2021-12-16
53	Silver metal sheet (headphone connector)	BL	BL	BL	BL	/	/	2021-12-16
54	Silver metal pin (headphone connector)	BL	BL	BL	BL	/	/	2021-12-16
55	Silver metal shell (USB interface)	BL	BL	BL	BL	/	/	2021-12-16
56	Black plastic sheet (USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
57	Silver metal pin (USB interface)	OL	BL	BL	BL	/	/	2021-12-16
58	Silver metal sheet with hole (key)	OL	OL	BL	X	/	/	2021-12-16
59	Black plastic button (key)	BL	BL	BL	BL	BL	BL	2021-12-16
60	Silver metal sheet (key)	OL	OL	BL	X	/	/	2021-12-16
61	Beige plastic bottom shell (key)	BL	BL	BL	BL	BL	BL	2021-12-16
62	Silver metal pin (key)	BL	BL	BL	BL	/	/	2021-12-16
63	Black body IC	BL	BL	BL	BL	BL	BL	2021-12-16
64	Black body triode	BL	BL	BL	BL	BL	BL	2021-12-16
65	Black body inductance	BL	BL	BL	BL	BL	BL	2021-12-16
66	Blue PCB	BL	BL	BL	BL	X	X	2021-12-16
67	Solder joint	BL	OL	BL	BL	/	/	2021-12-16
68	Light blue soft plastic shell (earphone plug)	BL	BL	BL	BL	BL	BL	2021-12-16
69	Transparent plastic inner shell (earphone plug)	BL	BL	BL	BL	BL	BL	2021-12-16
70	Silver metal contact (earphone plug)	X	BL	BL	BL	/	/	2021-12-16
71	Silver metal ring (earphone plug)	BL	X	BL	BL	/	/	2021-12-16
72	Silver metal shell (earphone plug)	OL	OL	BL	X	/	/	2021-12-16



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Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
73	Black plastic inner shell (earphone plug)	BL	BL	BL	BL	BL	BL	2021-12-16
74	Solder joint (earphone plug)	BL	BL	BL	BL	/	/	2021-12-16
75	Light blue plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
76	Green enamelled wire	OL	X	BL	X	/	/	2021-12-16
77	Gold enamelled wire	BL	BL	BL	BL	/	/	2021-12-16
78	Blue enamelled wire	BL	BL	BL	BL	/	/	2021-12-16
79	Blue plastic shell	BL	BL	BL	BL	BL	BL	2021-12-16
80	White plastic snap	BL	BL	BL	BL	BL	BL	2021-12-16
81	Black foam	BL	BL	BL	BL	BL	BL	2021-12-16
82	Blue soft plastic plug	BL	BL	BL	BL	BL	BL	2021-12-16
83	Gray plastic shell (key)	BL	BL	BL	BL	BL	BL	2021-12-16
84	White plastic button (key)	BL	BL	BL	BL	BL	BL	2021-12-16
85	Silver metal spring (key)	OL	OL	BL	X	/	/	2021-12-16
86	Silver metal sheet (key)	OL	OL	BL	X	/	/	2021-12-16
87	Black plastic base (key)	BL	BL	BL	BL	BL	BL	2021-12-16
88	Silver metal pin (key)	BL	BL	BL	BL	/	/	2021-12-16
89	Black plastic case (large USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
90	Silver metal shell (large USB interface)	BL	BL	BL	BL	/	/	2021-12-16
91	Black soft plastic film (large USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
92	White plastic sheet (large USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
93	Gold metal needle (large USB interface)	OL	BL	BL	BL	/	/	2021-12-16
94	Solder joint (large USB interface)	BL	BL	BL	BL	/	/	2021-12-16
95	Black plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
96	Red plastic thin thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
97	Black plastic thin thread leather	BL	BL	BL	BL	BL	BL	2021-12-16



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Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
98	Copper wire	OL	OL	BL	X	/	/	2021-12-16
99	Black plastic case (small USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
100	Silver metal shell (small USB interface)	BL	BL	BL	X	/	/	2021-12-16
101	Black plastic sheet (small USB interface)	BL	BL	BL	BL	BL	BL	2021-12-16
102	Silver metal sheet (small USB interface)	BL	BL	BL	X	/	/	2021-12-16
103	Silver metal pin (small USB interface)	OL	BL	BL	BL	/	/	2021-12-16
104	Bright pink plastic shell (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
105	Pink plastic (headband)	BL	BL	BL	BL	BL	BL	2021-12-16
106	Rose Pu	BL	BL	BL	BL	BL	BL	2021-12-16
107	Rose red printed white plastic sheet	BL	BL	BL	BL	BL	BL	2021-12-16
108	Rose red plastic shell	BL	BL	BL	BL	BL	BL	2021-12-16
109	Pink Pu	BL	BL	BL	BL	BL	BL	2021-12-16
110	Pink soft plastic shell	BL	BL	BL	BL	BL	BL	2021-12-16
111	Pink plastic thread leather	BL	BL	BL	BL	BL	BL	2021-12-16
112	Rose red soft plastic plug	BL	BL	BL	BL	BL	BL	2021-12-16
113	Pink plastic snap	BL	BL	BL	BL	BL	BL	2021-12-16
114	Rose red plastic shell	BL	BL	BL	BL	BL	BL	2021-12-16



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Note:

1. Results were obtained by XRF for primary screening, and further chemical testing by ICP(for Cd, Pb, Hg), UV-Vis(for Cr(VI)) and GC-MS(for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013(Unit: mg/kg).

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

Remark:

- BL= Below Limit
  - OL= Over Limit
  - X= The range of needing to do further testing
  - $3\sigma$ = The reproducibility of analytical instruments
  - N/A= Not applicable
  - LOD= Detection limit
2. The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
  3. The maximum permissible limit is quoted from the document RoHS Directive 2011/65/EU with amendment (EU) 2015/863.
  4. ▼=For restricted substances PBBs and PBDEs, the results show the total Br content, the restricted substance was Cr(VI), and the results showed the total Cr content.





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RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium(Cd)	100
Lead(Pb)	1000
Mercury(Hg)	1000
Hexavalent Chromium(Cr(VI))	1000
Polybrominated biphenyls(PBBs)	1000
Polybrominated diphenylethers(PBDEs)	1000
Dibutyl Phthalate(DBP)	1000
Butylbenzyl Phthalate(BBP)	1000
Di-(2-ethylhexyl) Phthalate(DEHP)	1000
Diisobutyl phthalate(DIBP)	1000

## Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes. The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.





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## **B. EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863 on Lead(Pb), Cadmium(Cd), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, DBP, BBP, DEHP & DIBP content**

Test method:

Lead(Pb) & Cadmium(Cd) Content:

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES) or Atomic absorption spectrometer (AAS).

Hexavalent Chromium(Cr(VI)) Content:

With reference to IEC 62321-7-1:2015, analysis was performed by UV-visible spectrophotometer (UV-Vis).

PBBs & PBDEs Content:

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

Phthalates(DBP, BBP, DEHP & DIBP) Content:

With reference to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

### **1) The test results of Lead(Pb) & Cadmium(Cd)**

Tested Items	Unit	MDL	Results				Limit
			(9)	(10)	(23)	(26)	
Lead(Pb) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			(43)	(51)	(58)	(60)	
Lead(Pb) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			(67)	(71)	(72)	(76)	
Lead(Pb) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results			Limit
			(85)	(86)	(98)	
Lead(Pb) Content	mg/kg	5	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			(23)	(24)	(25)	(43)	
Cadmium(Cd) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	100



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Tested Items	Unit	MDL	Results				Limit
			(46)	(47)	(57)	(58)	
Cadmium(Cd) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	100

Tested Items	Unit	MDL	Results				Limit
			(60)	(70)	(72)	(76)	
Cadmium(Cd) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	100

Tested Items	Unit	MDL	Results				Limit
			(85)	(86)	(93)	(98)	
Cadmium(Cd) Content	mg/kg	5	N.D.	N.D.	N.D.	N.D.	100

Tested Items	Unit	MDL	Results				Limit
			(103)				
Cadmium(Cd) Content	mg/kg	5	N.D.				100

## 2) The test results of Hexavalent Chromium(Cr(VI))(for coating on metal)

Tested Items	Unit	MDL	Results			Limit
			(23)	(26)	(43)	
Hexavalent Chromium(Cr(VI)) Content★	μg/cm <sup>2</sup>	0.10 (LOQ)	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results			Limit
			(58)	(60)	(72)	
Hexavalent Chromium(Cr(VI)) Content★	μg/cm <sup>2</sup>	0.10 (LOQ)	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results			Limit
			(76)	(85)	(86)	
Hexavalent Chromium(Cr(VI)) Content★	μg/cm <sup>2</sup>	0.10 (LOQ)	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results			Limit
			(98)	(100)	(102)	
Hexavalent Chromium(Cr(VI)) Content★	μg/cm <sup>2</sup>	0.10 (LOQ)	N.D.	N.D.	N.D.	1000



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### 3) The test results of Phthalates(DBP, BBP, DEHP &DIBP)

Tested Items	Unit	MDL	Results				Limit
			3	4	6	14	
Dibutyl Phthalate(DBP) Content	mg/kg	100	152	N.D.	270	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	373	558	222	239	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	158	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			20	29	30	33	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	N.D.	185	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			34	35	41	44	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	N.D.	N.D.	531	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			49	50	68	75	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	N.D.	N.D.	219	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	N.D.	N.D.	475	167	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000



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Tested Items	Unit	MDL	Results				Limit
			82	91	95	96	
Dibutyl Phthalate(DBP) Content	mg/kg	100	111	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	136	774	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	125	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results				Limit
			97	106	109	110	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	N.D.	150	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	N.D.	299	303	130	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	N.D.	N.D.	N.D.	1000

Tested Items	Unit	MDL	Results			Limit
			111	112	16	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	117	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	130	133	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	123	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			1+5+12+13+15+17	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000



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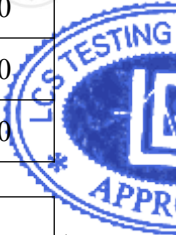
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Tested Items	Unit	MDL	Results	Limit
			18+21+22+27+31+32	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			38+42+48+52+56+59	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			61+63+64+65+66+69	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			73+79+80+81+83+84	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	753	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000





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Tested Items	Unit	MDL	Results	Limit
			87+89+92+99+101+104	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			105+107+108+113+114	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000



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## 4) The test results of PBBs & PBDEs

Tested Items	Unit	MDL	Results				Limit
			(27)	(38)	(48)	(66)	
<b>Polybrominated Biphenyls(PBBs) Content</b>							
Monobromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Dibromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Tribromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Octabromobiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Total content	mg/kg	/	N.D.	N.D.	N.D.	N.D.	1000
<b>Polybrominated Diphenylethers(PBDEs) Content</b>							
Monobromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether	mg/kg	5	N.D.	N.D.	N.D.	N.D.	/
Total content	mg/kg	/	N.D.	N.D.	N.D.	N.D.	1000



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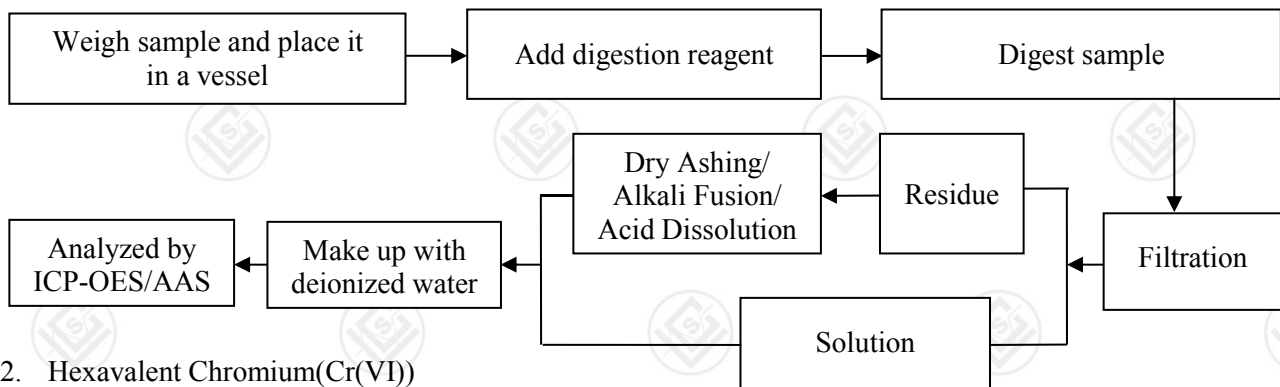
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Note:

- MDL = Method Detection Limit
- N.D.=Not Detected(<MDL or LOQ)
- mg/kg = ppm=parts per million
- LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is  $0.10 \mu\text{g}/\text{cm}^2$
- ★ = a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than  $0.13 \mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain Cr(VI).  
b. The sample is negative for Cr(VI) if Cr(VI) is N.D.(concentration less than  $0.10 \mu\text{g}/\text{cm}^2$ ). The sample coating is considered a non- Cr(VI) based coating.  
c. The result between  $0.10 \mu\text{g}/\text{cm}^2$  and  $0.13 \mu\text{g}/\text{cm}^2$  is considered to be inconclusive, unavoidable coating variations may influence the determination.
- Information on storage conditions and production date of the tested samples is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

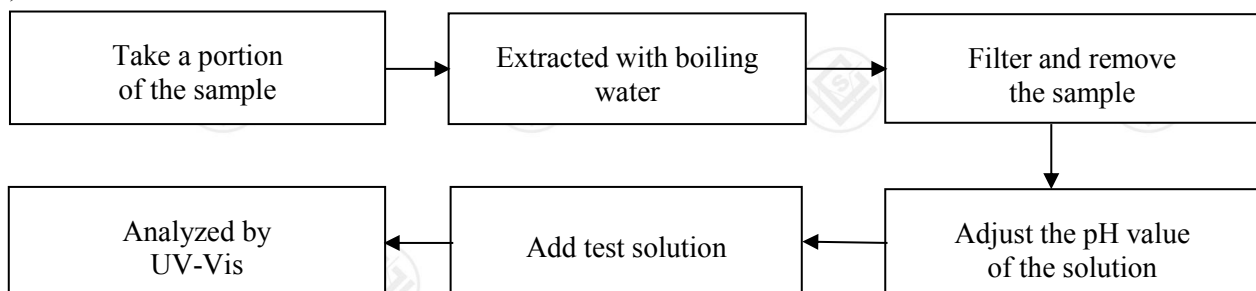
## Test Process

### 1. Lead(Pb) & Cadmium(Cd): IEC 62321-5:2013



### 2. Hexavalent Chromium(Cr(VI))

#### 1) IEC 62321-7-1:2015







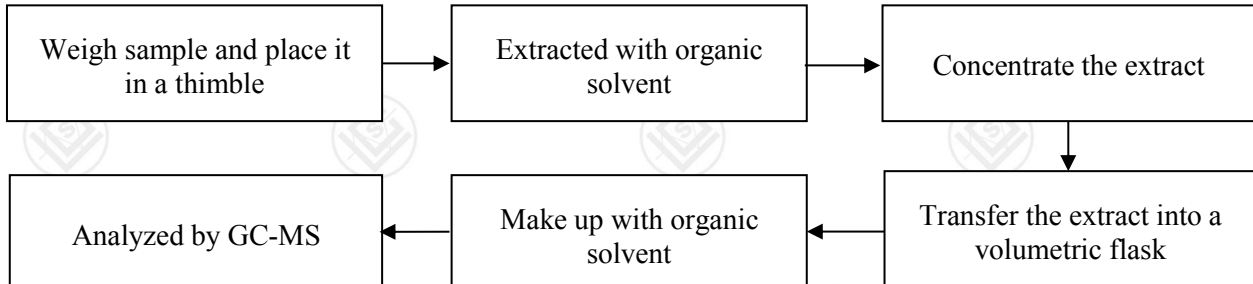
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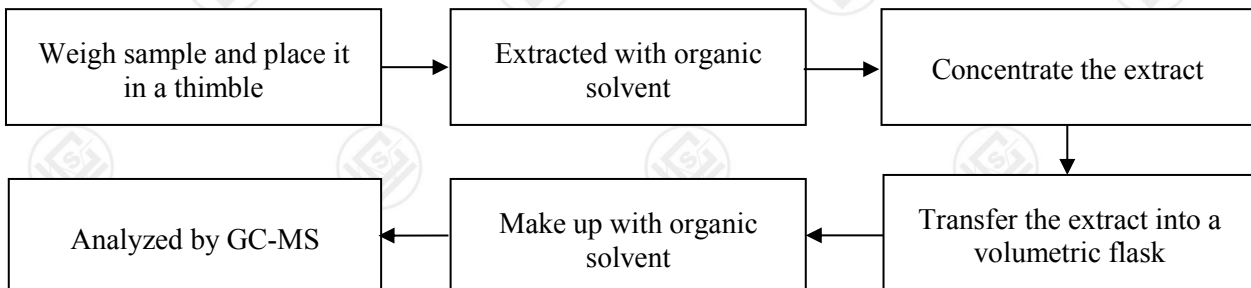
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### 3. Polybrominated Biphenyls(PBBs) & Polybrominated Diphenyl Ethers(PBDEs) : IEC 62321-6:2015



### 4. Phthalates(DBP, BBP, DEHP & DIBP) : IEC 62321-8:2017





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## The photo(s) of the sample



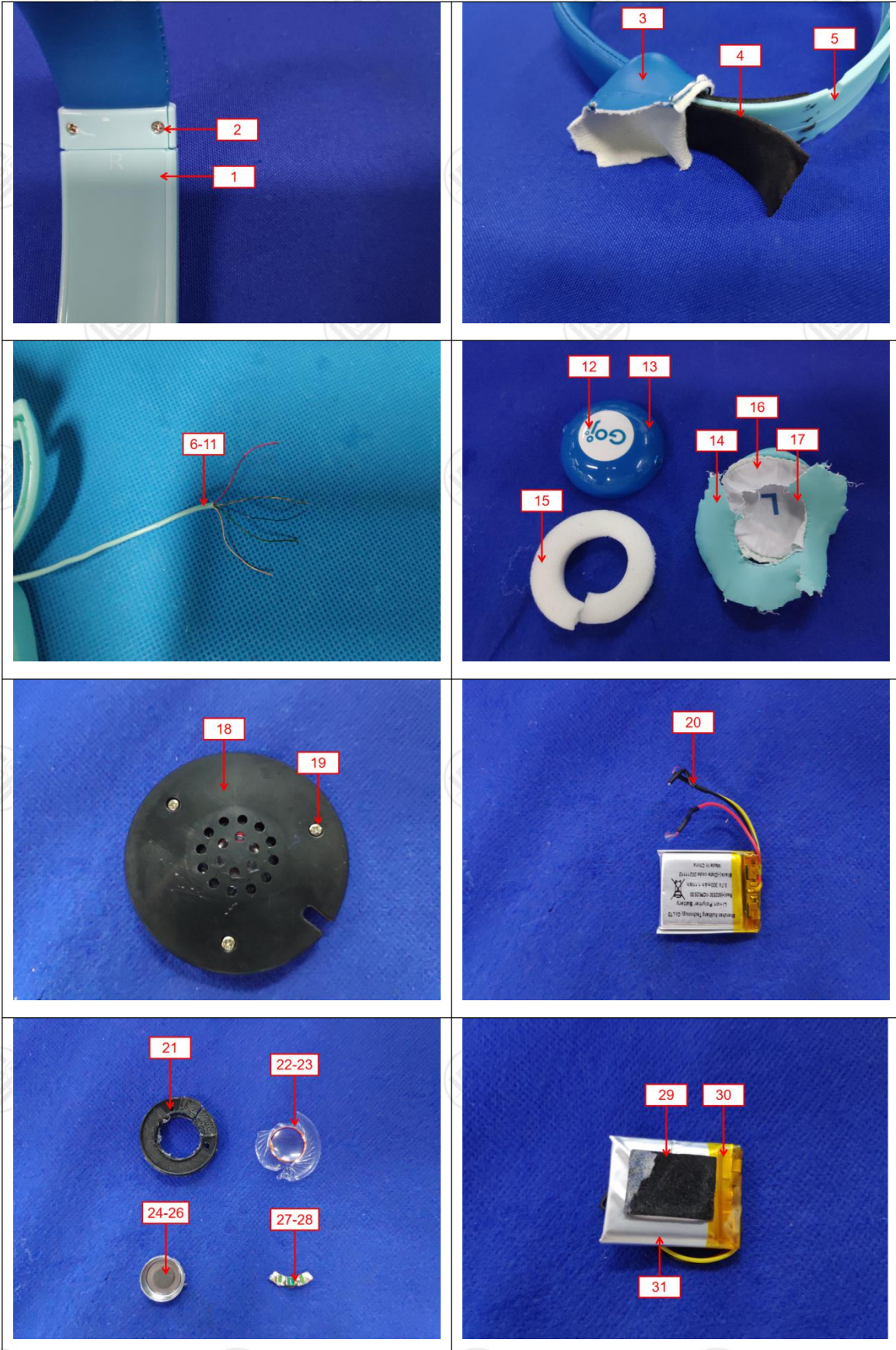


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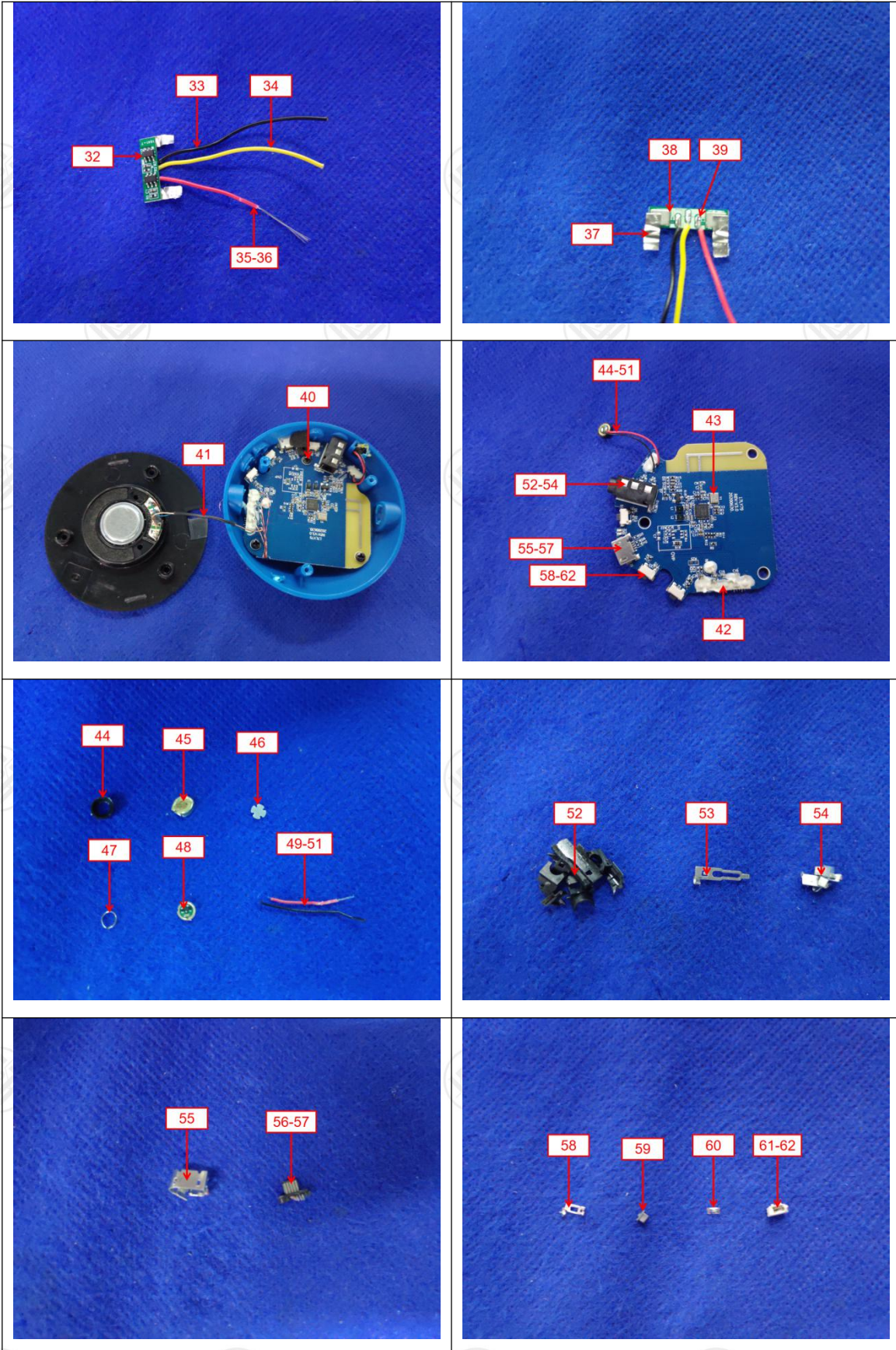


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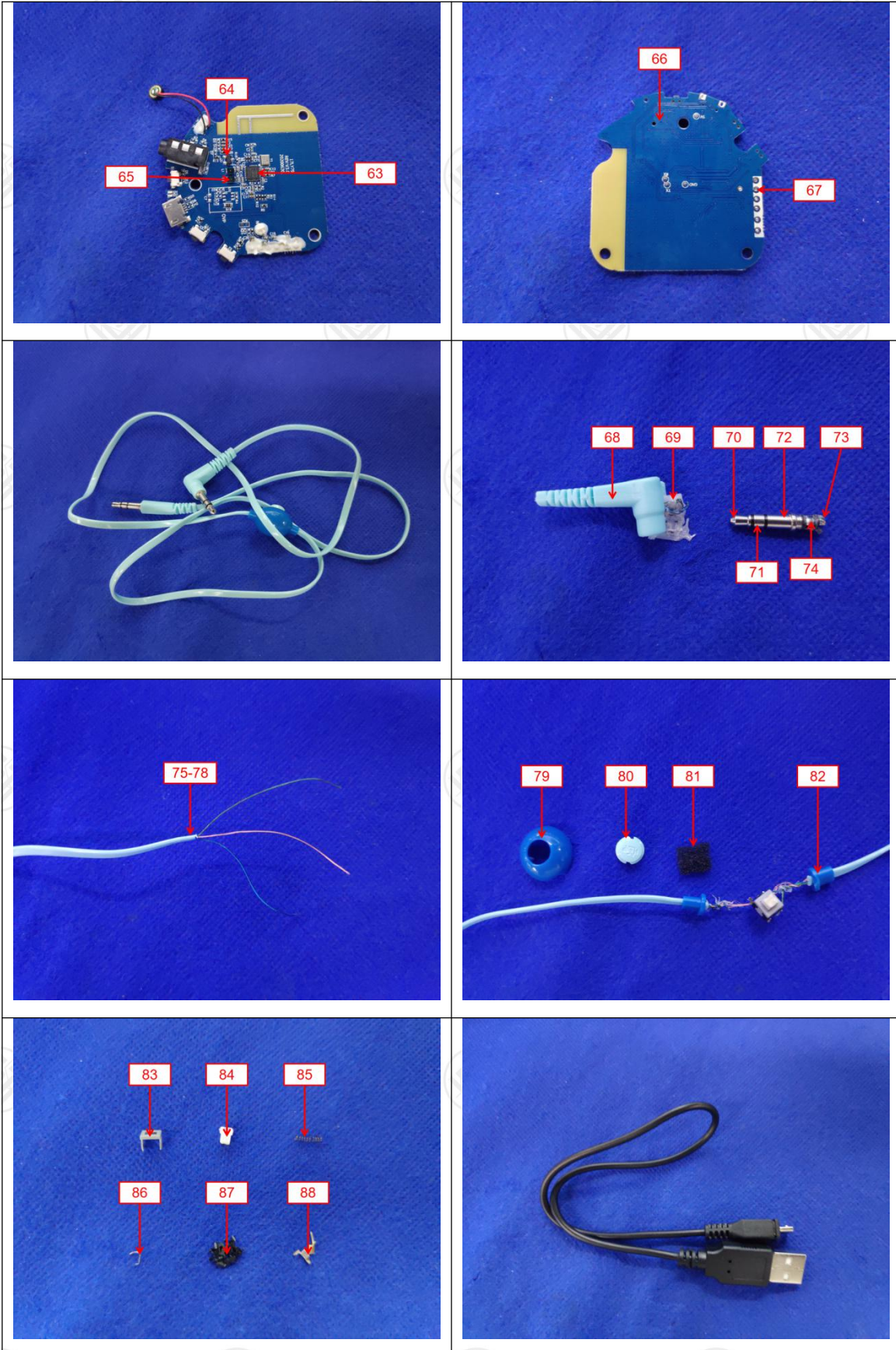


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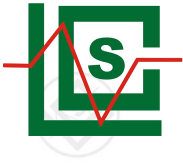
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## Statement:

1. The test report is invalid without the signature of the approver and the special seal for the company's report;
2. The Company Name, Address and sample information shown on the Report were provided by the applicant who should be responsible for the authenticity which are not verified by LCS;
3. The test results in this report are only responsible for the tested samples;
4. Without written approval of LCS, this report can't be reproduced except in full;
5. In case of any discrepancy between the corresponding Chinese and English contents in the test report, the Chinese version shall prevail.

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