

TEST REPORT

NO.: A001R140515027001

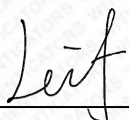
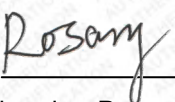
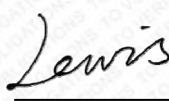
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Applicant: I.R.I.S. S.A.**Address:** Rue du Bosquet 10, 1348 Louvain-La-Neuve, Belgium**Report on the submitted sample said to be:****Sample name:** scanner**Model:** IRIScan™ Anywhere 3 Wifi**Item/Lot No.:** /**Material:** /**Buyer:** I.R.I.S. S.A.**Supplier:** SKY LIGHT Electronic (Shenzhen) Limited**Manufacturer:** SKY LIGHT Electronic (Shenzhen) Limited**Sample received date:** May 15, 2014**Testing period:** From May 15, 2014 to May 26, 2014**Conclusion:**

<u>Tested samples</u>	<u>Standard</u>	<u>Conclusion</u>
(1). Screening components of submitted samples	Screening by XRF spectroscopy and chemical confirmation test for RoHS directive (2011/65/EU)	Pass
(2). Testing the submitted sample	Determining the Lead, Cadmium & Mercury content for Directive 2006/66/EC	Pass

*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

Signed for and on behalf of
Shenzhen AOV Testing Technology Co., LtdTested by: 
Li Xian Yong, Leif
Project LeaderReviewed by: 
Luo Jun, Rosary
Vice Technical SupervisorApproved by: 
Liu Lin Wen, Lewis
Technical Supervisor

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Test Method: (1)

(a) Screening by X-ray Fluorescence Spectrometry (XRF) :With reference to IEC 62321-3-1:2013 Ed 1.0 Screening – Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry

(b) Chemical test:

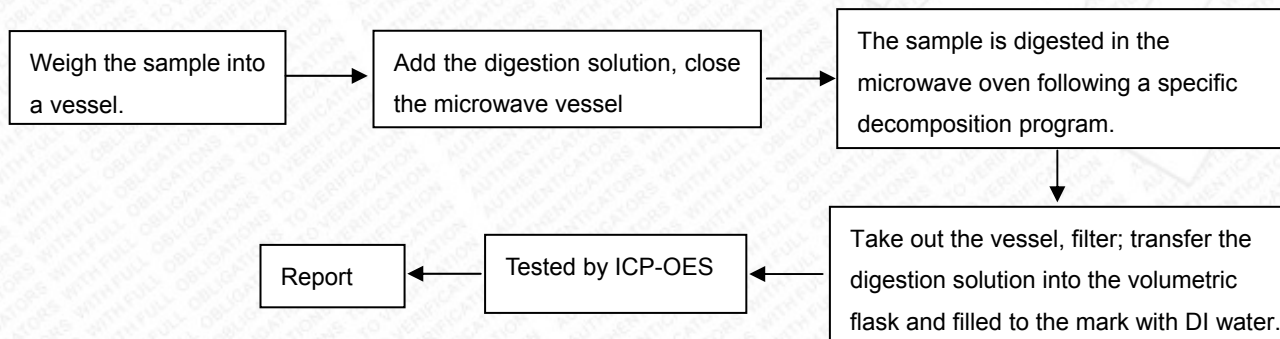
Test Item	Pretreatment Method	Measuring Instrument	MDL
Lead (Pb)	IEC 62321-5:2013 Ed 1.0 Section 7	ICP-OES	2 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed 1.0 Section 7	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321-4:2013 Ed 1.0 Section 7	ICP-OES	2 mg/kg
Hexavalent Chromium (Cr ⁶⁺)	IEC 62321:2008 Ed 1.0 Annex C	UV-VIS	2 mg/kg
Hexavalent Chromium (Cr ⁶⁺)	IEC 62321:2008 Ed 1.0 Annex B	UV-VIS	/
Polybrominated Biphenyls (PBBs)/ Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321:2008 Ed 1.0 Annex A	GC-MS	5 mg/kg

(2).

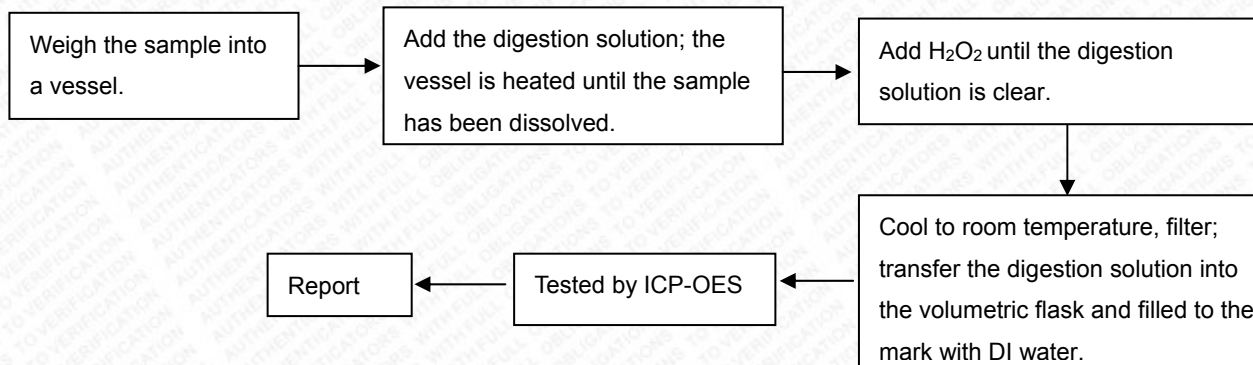
Test Item	Test Method	Measuring Instrument	MDL
Lead (Pb), Cadmium (Cd), Mercury (Hg)	US EPA 6010C:2007	ICP-OES	2 mg/kg

Test Flow (Chemical Test):

1. To Determine Lead, Cadmium Content(for Polymer, Electronics, Battery Directive):



2. To Determine Lead, Cadmium Content (for Metals):



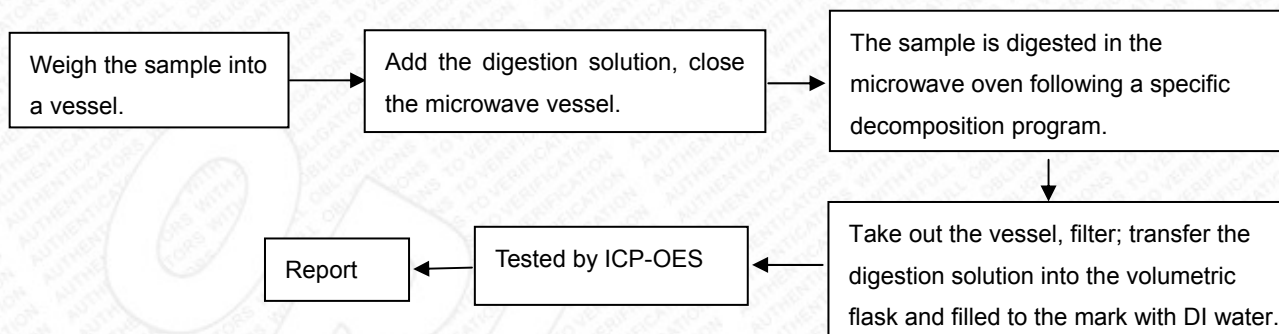
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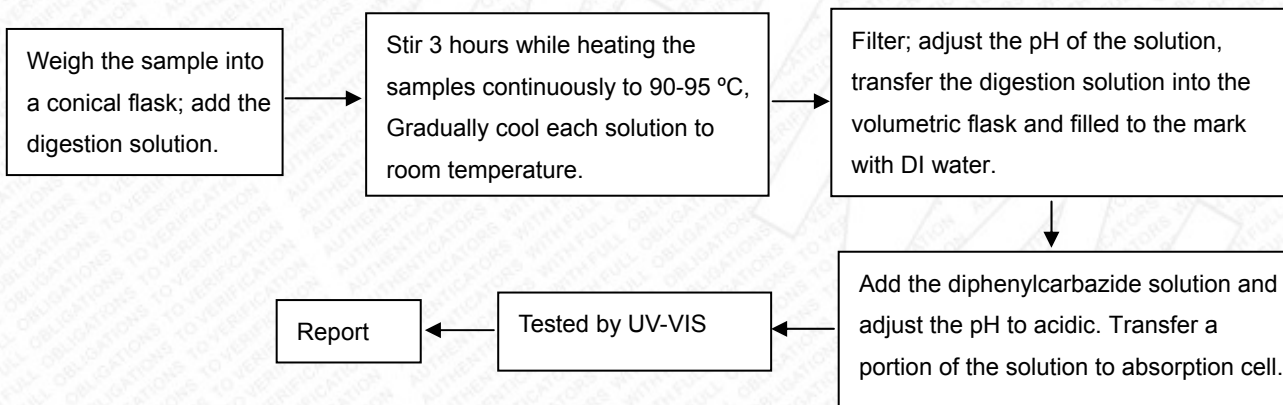
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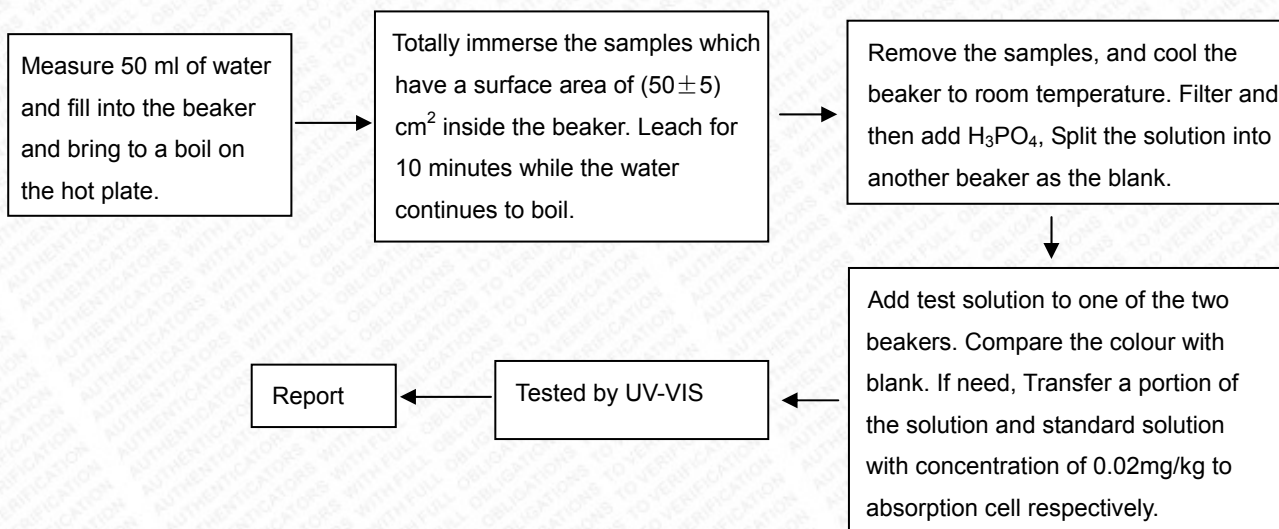
3. To Determine Mercury Content:



4. To Determine Hexavalent Chromium Content (for Polymer, Electronics):



5. To Determine Hexavalent Chromium Content (for Metals/boiling water extraction):



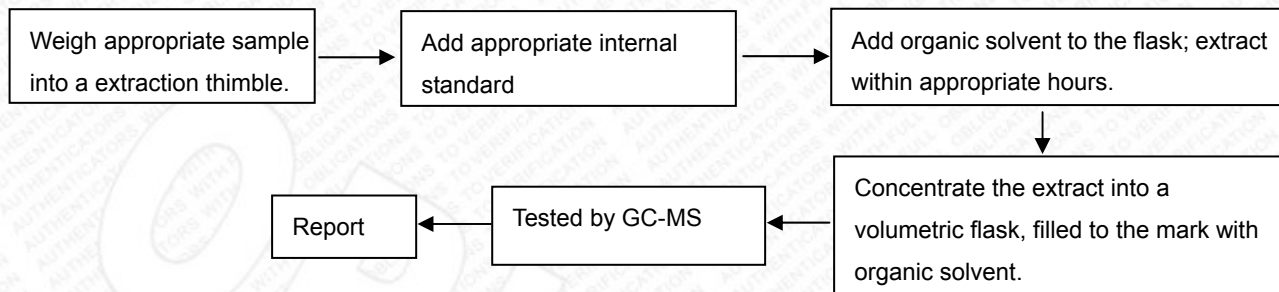
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6. To Determine Polybrominated Biphenyls/Polybrominated Diphenyl Ethers Content:



Test Results:

(1)

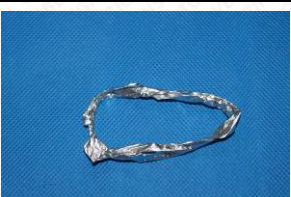
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
1	USB wire USB head Metal head	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
2	USB wire USB head White inner plastic	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
3	USB wire USB head Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
4	USB wire USB head Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		

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Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
5	USB wire USB head Handle	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
6	USB wire USB head Black inner plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
7	USB wire Binding wire Jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
8	USB wire Binding wire Wire core	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
9	USB wire Wire material Black electric wire outer jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
10	USB wire Wire material Metal wire	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
11	USB wire Wire material Aluminum foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
12	USB wire Wire material Black jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
13	USB wire Wire material White jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
14	USB wire Wire material Red jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
15	USB wire Wire material Green jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
16	USB wire Wire material Wire core	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
17	USB wire Wire material Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
18	USB wire Wire material Magnetic ring	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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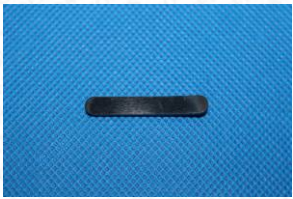
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
19	USB wire Plug Metal head	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
20	USB wire Plug Black inner plastic	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
21	USB wire Plug Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
22	USB wire Plug Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
23	USB wire Plug Handle	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
24	USB wire Plug Metal wire	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
25	USB wire Plug Crepe paper	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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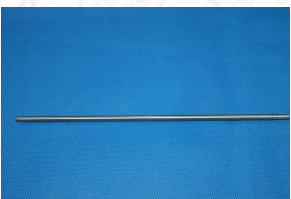
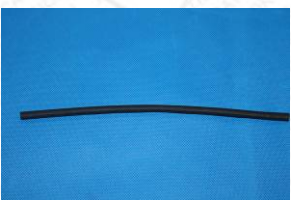
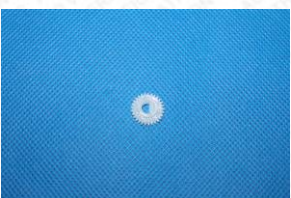
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
26	Black screw	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
27	Black foot pad	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
28	Double-side adhesive	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
29	White paster	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
30	Black plastic shell	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
31	Black sponge	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
32	Metal strip	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		

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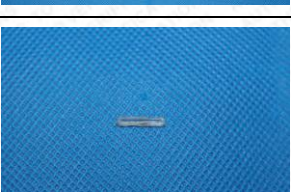
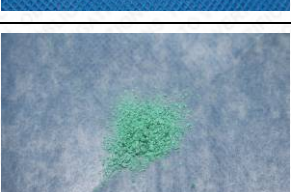
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
33	Black coating	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
34	White coating	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
35	Metal card	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
36	Metal axle	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
37	Black silicon gel tube	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
38	White plastic wheel gear	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
39	Spring	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		

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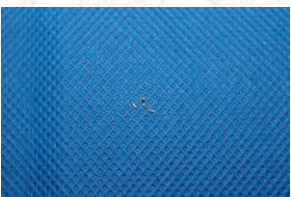
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
40	Copper foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
41	White paster	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
42	Glass	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
43	Black plastic frame	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
44	Black sponge	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
45	Glue	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
46	PCB Flux	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		

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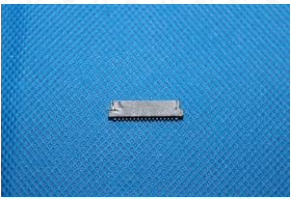
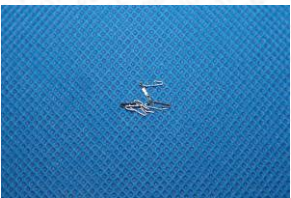
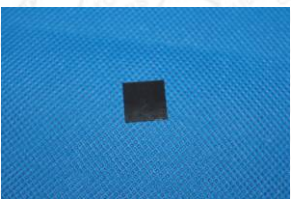
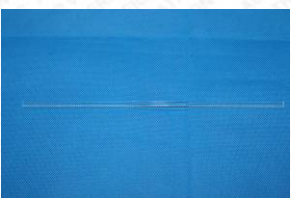
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
47	PCB Substrate	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
48	PCB Copper foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
49	PCB Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
50	Chip resistor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
51	Chip capacitor	Pb	BL	Cd: N.D.	
		Cd	(#1) Inconclusive		
		Hg	BL		
		Cr	BL		
		Br	BL		
52	LED White plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
53	LED Transparent glue	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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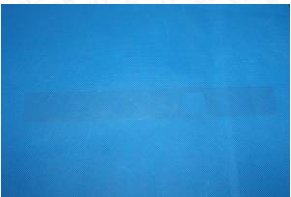
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
54	LED Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
55	Wire holder Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
56	Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
57	Black film	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
58	White plastic strip	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
59	Transparent plastic strip	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
60	Faceplate Black coating	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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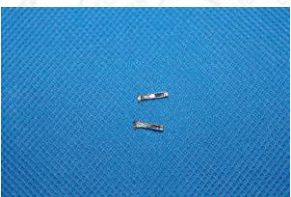
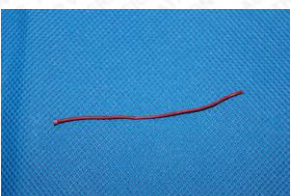
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
61	Faceplate White plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
62	Faceplate Visors Protective film	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
63	Faceplate Visors Black coating	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
64	Faceplate Visors Transparent plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
65	Faceplate Visors Double-side adhesive	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
66	Faceplate Key Plating layer	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
67	Faceplate Key Base material	Pb	BL	Cr ⁶⁺ : N.D.	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	BL		

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Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
68	Faceplate Key Silicon gel	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
69	Faceplate Black sponge	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
70	Battery Wire holder White plastic	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
71	Battery Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
72	Battery Black jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
73	Battery Red jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
74	Battery Wire core	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		

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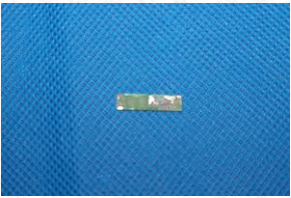
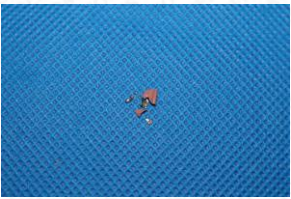
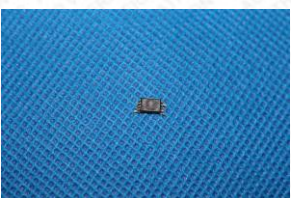
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
75	Battery Crepe paper	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
76	Battery Black sponge	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
77	Battery Double-side adhesive	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
78	Battery Transparent tape	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
79	Battery White paste	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
80	Battery Nickel sheet	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
82	Battery PCB Flux	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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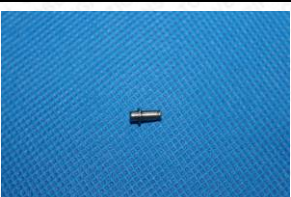
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
83	Battery PCB Substrate	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
84	Battery PCB Copper foil	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
85	Battery PCB Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
86	Battery Chip capacitor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
87	Battery Chip resistor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
88	Battery IC big Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
89	Battery IC big Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		

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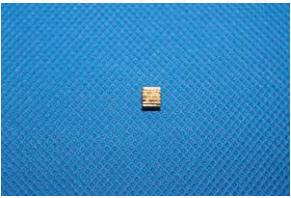
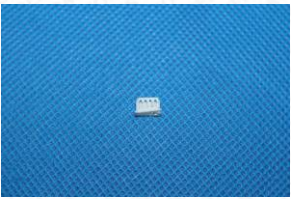
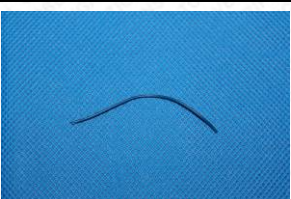
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
90	Battery IC small Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
91	Battery IC small Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
92	Motor Wheel gear box Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
93	Motor Wheel gear box Lubricating oil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
94	Motor Wheel gear box White plastic wheel gear	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
95	Motor Wheel gear box Jump ring	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
96	Motor Wheel gear box Axle	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		

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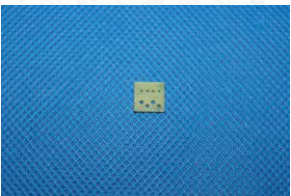
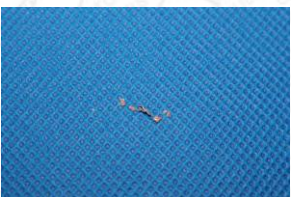
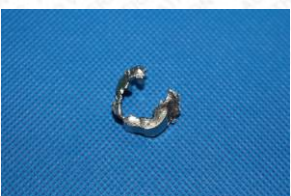
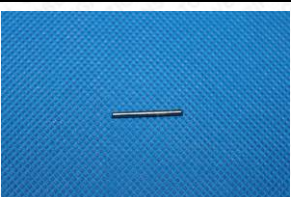
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
97	Motor Wheel gear box Copper wheel gear	Pb	OL	Pb: 31425(#3)	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
98	Motor Wire holder White plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
99	Motor Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
100	Motor Black jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
101	Motor White jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
102	Motor Red jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
103	Motor Blue jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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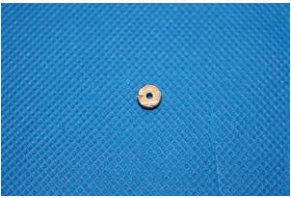
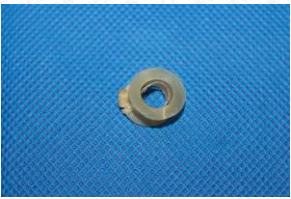
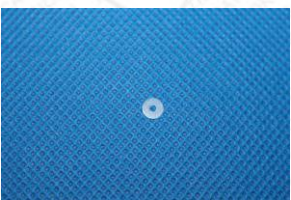
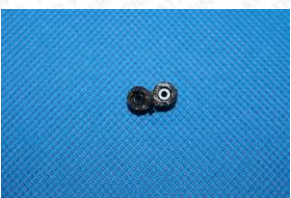
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
104	Motor Wire core	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
105	Motor PCB Flux	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
106	Motor PCB Substrate	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
107	Motor PCB Copper foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
108	Motor PCB Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
109	Motor Metal shell	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
110	Motor Axle	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		

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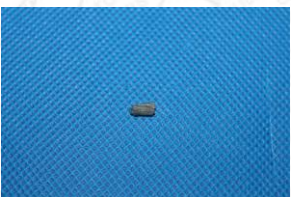
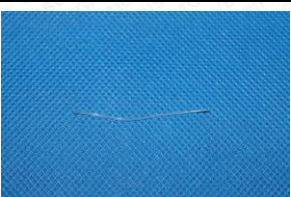
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
111	Motor Bearing	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
112	Motor Skeleton	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
113	Motor Enameled wire paint	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
114	Motor Enameled wire copper wire	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
115	Motor White spacer	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
116	Motor Magnet	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
117	PCB Flux	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		

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Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
118	PCB Substrate	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
119	PCB Copper foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
120	PCB Soldering tin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
121	Double -side adhesive	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
122	Black electric wire outer jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
123	Metal wire	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
124	Transparent jacket	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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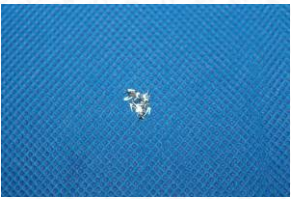
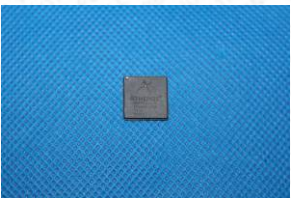
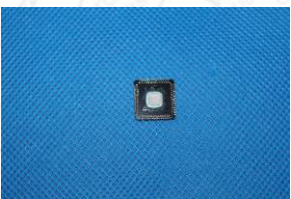
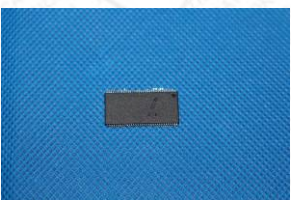
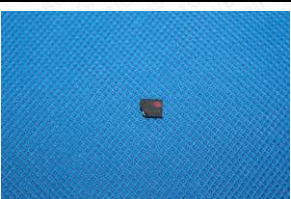
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
125	Wire core	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
126	Chip capacitor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
127	Chip resistor	Pb	OL	Pb: 1176(#3)	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
128	Chip IC	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
129	Chip crystal oscillator	Pb	BL	Cr ⁶⁺ : N.D.	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	BL		
130	Chip inductor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
131	Wire holder Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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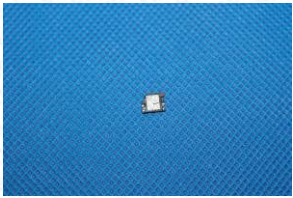
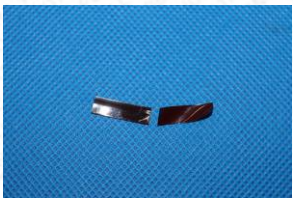
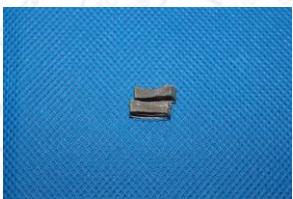
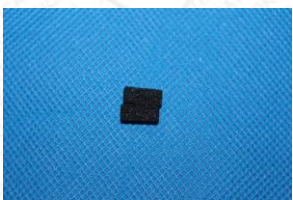
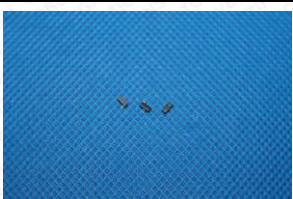
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
132	Wire holder White plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
133	Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
134	IC 1401 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
135	IC 1401 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
136	IC 824A Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
137	IC 824A Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
138	IC 12G Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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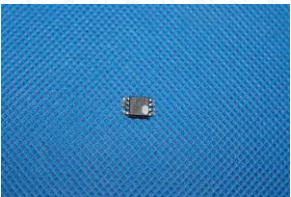
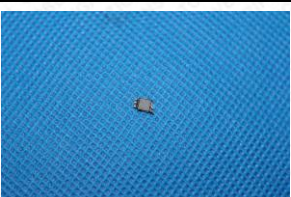
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
139	IC 12G Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
140	FPC	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
141	Brown film	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
142	Silvery cloth paste	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
143	Black sponge	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
144	Chip diode	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
145	Chip triode	Pb	BL	PBBs: N.D. PBDEs: N.D.	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		

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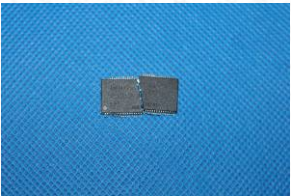
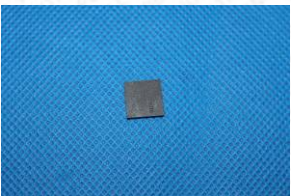
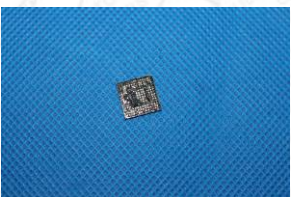
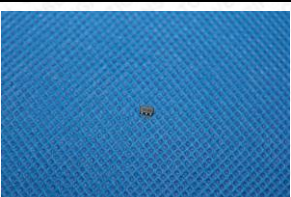
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
146	Chip tantalum capacitor	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
147	IC U12 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
148	IC U12 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
149	IC U11 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
150	IC U11 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
151	IC U1 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
152	IC U1 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		

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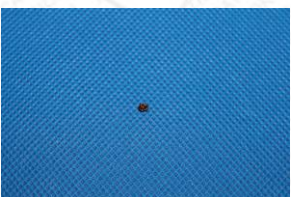
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
153	IC U10 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
154	IC U10 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
155	IC U9 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
156	IC U9 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
157	IC U7 Body	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
158	IC U7 Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
159	Chip IC U3	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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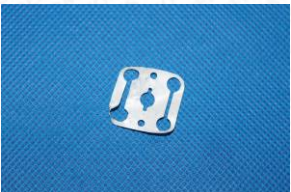
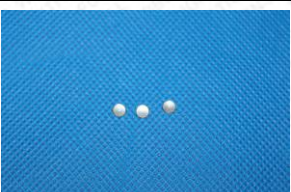
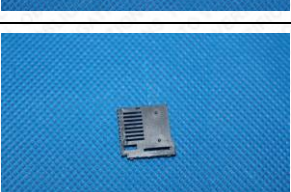
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
160	Chip IC U5	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
161	Chip IC U6	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
162	Chip IC U8	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
163	Chip IC U14	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
164	Inductor Enameled wire paint	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
165	Inductor Enameled wire copper wire	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
166	Inductor Magnet frame	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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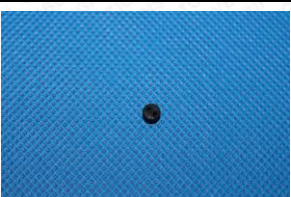
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
167	Key Transparent tape	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
168	Key White tape	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
169	Key Shrapnel	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
170	Chip crystal oscillator Y1	Pb	OL	Pb: 11753(#3)	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
171	Cassette Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
172	Metal sheet	Pb	BL	Cr ⁶⁺ : ** Negative	
		Cd	BL		
		Hg	BL		
		Cr	(#2) Inconclusive		
		Br	N.A.		
173	Black inner plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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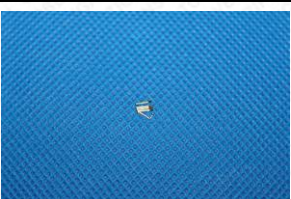
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
174	Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
175	Wire holder Black plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
176	Wire holder White plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
177	Wire holder Terminal	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
178	Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
179	Electrolytic capacitor Drivepipe	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
180	Electrolytic capacitor Rubber	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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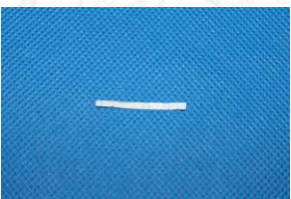
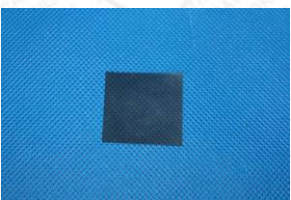
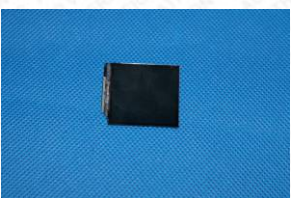
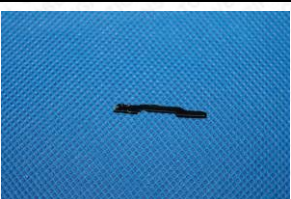
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
181	Electrolytic capacitor Electrolytic paper	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
182	Electrolytic capacitor Aluminum foil	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
183	Electrolytic capacitor Aluminum shell	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
184	Electrolytic capacitor Pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
185	USB head Metal head	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
186	USB head Black inner plastic	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
187	USB head Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		

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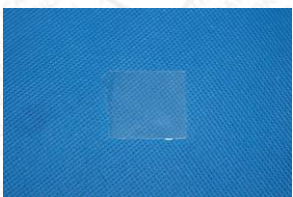
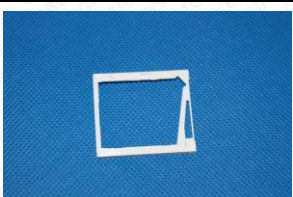
Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
188	Wire holder White plastic	Pb	BL	Cd: N.D. PBBs: N.D. PBDEs: N.D.	
		Cd	(#1) Inconclusive		
		Hg	BL		
		Cr	BL		
		Br	(#2) Inconclusive		
189	Wire holder Contact pin	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	N.A.		
190	LCD FPC	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
191	White paper	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
192	Polarized board	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
193	Glass	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
194	Black glue	Pb	BL	Cd: N.D.	
		Cd	(#1) Inconclusive		
		Hg	BL		
		Cr	BL		
		Br	BL		

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Part no.	Sample name	XRF results		Chemical confirmation result(mg/kg)	Photo
195	Chip	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
196	Chip LED	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
197	Black tape	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
198	Uniform film	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
199	Uniform board	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
200	Reflector board	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
201	White plastic frame	Pb	BL	---	
		Cd	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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(2)

Part no.	Sample name	Item	Unit	Limit	Result	Photo
81	Battery core	Pb	mg/kg	/	N.D.	
		Cd	mg/kg	20	N.D.	
		Hg	mg/kg	5	N.D.	

Note:

- According to the Directive 2006/66/EC, batteries, accumulators and button cells containing more than 0,0005 % mercury, more than 0,002 % cadmium or more than 0,004 % lead, shall be marked with the chemical symbol for the metal concerned: Hg, Cd or Pb.
- According to the Directive 2006/66/EC, Member States shall prohibit the placing on the market of batteries and accumulators, containing more than 0.0005% of mercury by weight and 0.002% of cadmium by weight, including in those cases where these batteries and accumulators are incorporated into appliances. Button cells with a mercury content of no more than 2 % by weight shall be exempted from this prohibition.

Remark:

- Specimens, which requested to determine Cadmium, Mercury and Lead Content by chemical test, have been dissolved completely.
- mg/kg = ppm
- N.D.=not detected(<MDL)
- MDL=Method Detection Limit
- N.A.= Not Applicable
- BL= BELOW LIMIT
- OL= OVER LIMIT
- **Boiling water extraction:
Negative=Absence of Cr^{6+} ;
Positive=Presence of Cr^{6+} ; the detected concentration in boiling water extraction solution is equal or greater than 0.02mg/kg with 50cm² sample surface area.
- Storage conditions and production date of the tested sample are unavailable and thus results of Cr^{6+} represent status of the sample at the time of testing.
- “Homogeneous material” means one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.
- (#1) = The screening result was found in the region of inconclusive (See Table B) and further chemical tests were suggested.
- (#2) = Cr or Br were detected above the screening Limit (see table B) and further chemical tests were suggested.
- (#3) = Sample97 is copper alloy. The lead content which is under 4% (40000ppm) is exempted from the requirement of Directive 2011/65/EU (RoHS)
- (#3) = Sample 127/170 is electronic component. The lead content in glass of electronic components is exempted from the requirement of Directive 2011/65/EU (RoHS)

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(B) XRF Screening Limit in mg/kg for regulated elements in various matrices.

Element	Polymer materials	Metallic materials	Composite materials
Cd	$BL \leq (70 - 3\sigma) < X < (130 + 3\sigma) \leq OL$	$BL \leq (70 - 3\sigma) < X < (70 + 3\sigma) \leq OL$	$LOD < X < (150 + 3\sigma) \leq OL$
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	$BL \leq (300 - 3\sigma) < X$	Not Applicable	$BL \leq (250 - 3\sigma) < X$

Remark:

- A "BELOW LIMIT" (BL) or "OVER LIMIT" (OL) determination will be set at 30 % (50 % for composite materials) less than or greater than the limit, respectively. The margins of safety have been agreed upon based on the experience of many experts and practitioners in the industry. Further explanation for this approach to estimating uncertainty.
- The symbol "X" marks the region, where further investigation is necessary.
- LOD means Limit of Detection.
- The term " σ " expresses the repeatability of the analyzer at the action level.

(C) RoHS Requirement

Restricted substances	Limits
Lead (Pb)	0.1% (1000 ppm)
Cadmium (Cd)	0.01% (100 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Hexavalent Chromium (Cr^{6+})	0.1% (1000 ppm)
Polybrominated biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated diphenyl ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2011/65/EU.

Remark:

- Chemical confirmation tests were conducted to verify the inconclusive results, Hexavalent Chromium (Cr^{6+}), Polybrominated biphenyls(PBBs) and Polybrominated diphenyl ethers(PBDEs) content.
- As requested by the applicant, only components shown in this report were screened by XRF spectroscopy for 2011/65/EU, other components were not screened included in this report.

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 results 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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- Photo is included.

Photographs of Samples



scanner

End of Report