

## CERTIFICATE OF CONFORMITY

**No.** : HX210101031844R1

**Applicant** : Shenzhen Wanchenghui Electronics Co., Ltd.

**Address** : Floor 2-4, Building 2, No.7 Nantong Avenue, Baolong Street,  
Longgang District, Shenzhen

**Manufacturer** : Shenzhen Wanchenghui Electronics Co., Ltd.

**Address** : Floor 2-4, Building 2, No.7 Nantong Avenue, Baolong Street,  
Longgang District, Shenzhen

**Product** : Cervical massager

**Model(s)** : F2, F4, F6, F8, F10, F12, F14, F16, F18, F20, F2+

**Trademark** : N/A

**Test Standard(s)** : **EN 55014-1: 2017;**  
**EN 55014-2: 2015.**

The EUT described above has been tested by us with the listed standards and found in compliance with the Council EMC Directive 2014/30/EU. It is possible to use CE marking to demonstrate the compliance with the EMC Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: HX210101031844R1.



Jul. 13, 2021

Shenzhen HX Detect Certification Co., Ltd.

2/F, bostai, building 22, Tangxi Yongli Industrial Zone, guxing community, Xixiang street,  
Bao'an District, Shenzhen

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# Test Report

**Applicant** : Shenzhen Wanchenghui Electronics Co., Ltd.  
**Address** : Floor 2-4, Building 2, No.7 Nantong Avenue, Baolong Street, Longgang District, Shenzhen  
**Manufacturer** : Shenzhen Wanchenghui Electronics Co., Ltd.  
**Address** : Floor 2-4, Building 2, No.7 Nantong Avenue, Baolong Street, Longgang District, Shenzhen

**The submitted sample and sample information was/were submitted and identified by/on the behalf of the client**

**Sample name** : Cervical massager  
**Sample Model** : F2, F4, F6, F8, F10, F12, F14, F16, F18, F20, F2+  
**Trademark** : N/A

## TEST INFORMATION

**Date of Receipt** : 2021-01-22  
**Date of Test** : 2021-01-22 to 2021-01-28  
**Issue Date** : 2021-07-13  
**Test Method** : Please refer to the following page(s).  
**Test Result(s)** : Please refer to the following page(s).

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

**Test/Witness Engineer** :



**Approved & Authorized** :

*Andy Zhang*



Compared with the original report HX210101031846, this report only added a series of models, and the original report HX210101031846 is invalid as of the date of issue of this report.

**Tested Sample/Part Description**

No.	Component Description(non-metallic)	No.	Component Description(metal)
1	Shell	12	Screw
2	Switch Button	13	Stainless steel massage head
3	PCB	14	Interface
4	Silicone	15	Solder
5	Chip Resistor		
6	Chip Capacitors		
7	Luminous Diode		
8	Wire		
9	Li-Polymer Battery		
10	SMD Diode		
11	Crystal		

**Test Result of XRF  
(1)XRF**

Tested Item(s)	Result														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Lead (Pb)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Cadmium (Cd)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Mercury (Hg)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Chromium (Cr)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
Total Bromine (Br)	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	/	/	/	/

**(1) Test Method**

Tested Item(s)	Test Method	Test instrument
Lead (Pb) Cadmium (Cd) Mercury (Hg) Total Chromium (Cr) Total Bromine (Br)	IEC 62321-2:2013, IEC 62321-1:2013, IEC 62321-3-1:2013,	XRF

**Remark:**

- (a) BL = Below Limit, OL = Over Limit, LOD = Limit of Detection, -- = Not Regulated,  
 $3\sigma$  = The reproducibility of analytical instruments  
 X: the region where further investigation is necessary,  
 \*=The screened result was found by XRF and further chemical test was suggested
- (b) There are the results on total Br while test items on restricted substances are PBBs and PBDEs.  
 There is the result on total Cr while test item on restricted substances is Cr(VI).
- (c) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321 (unit: mg/kg).

Element	Polymer materials	Metallic materials	Composite materials
Cadmium ( Cd )	$BL \leq (70-3\delta) < X < (130+3\delta) \leq OL$	$BL \leq (70-3\delta) < X < (130+3\delta) \leq OL$	$LOD < X < (150+3\delta) \leq OL$
Lead ( Pb )	$BL \leq (700-3\delta) < X < (1300+3\delta) \leq OL$	$BL \leq (700-3\delta) < X < (1300+3\delta) \leq OL$	$BL \leq (500-3\delta) < X < (1500+3\delta) \leq OL$
Mercury ( Hg )	$BL \leq (700-3\delta) < X < (1300+3\delta) \leq OL$	$BL \leq (700-3\delta) < X < (1300+3\delta) \leq OL$	$BL \leq (500-3\delta) < X < (1500+3\delta) \leq OL$
Chromium (Cr)	$BL \leq (700-3\delta) < X$	$BL \leq (700-3\delta) < X$	$BL \leq (500-3\delta) < X$
Bromine (Br)	$BL \leq (300-3\delta) < X$	Not Applicable	$BL \leq (250-3\delta) < X$

**RoHS Requirement**

Restricted substances	Limits
Lead(Pb)	0.1%(1000 ppm)
Cadmium(Cd)	0.01%(100 ppm)
Mercury(Hg)	0.1%(1000 ppm)
Chromium(VI)( Cr6+)	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 with amendment (EU) 2015/863.

## (2)Chemical Test

### (a)The test result of PBBs, PBDEs

Tested Item	Result(mg/kg)										
	1	2	3	4	5	6	7	8	9	10	11
Monobromobiphenyl (MonoBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl (DiBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl (TriBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl (TetraBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl (PentaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl (HexaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl (HeptaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl (OctaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl (NonaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl (DecaBB)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of polybrominated Biphenyls(PBBs)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether (MonoBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether (DiBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether (TriBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether (TetraBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether (PentaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether (HexaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether (HeptaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether (OctaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether (NonaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether (DecaBDE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of polybrominated diphenyl ethers(PBDEs)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

**(b) The test result of DBP, BBP, DEHP, DIBP**

Tested Item(s)	Result										
	1	2	3	4	5	6	7	8	9	10	11
Dibutyl phthalate(DBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl phthalate(BBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	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.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate(DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

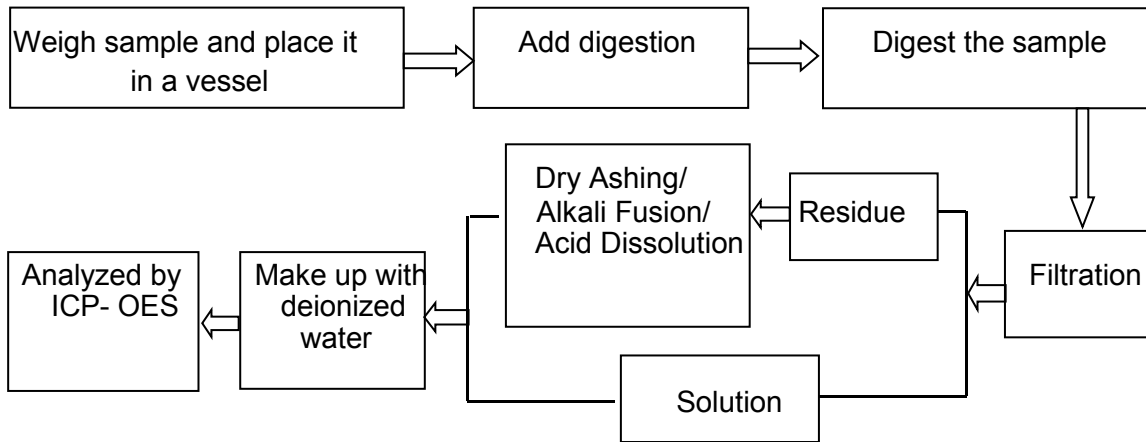
**(c) Test Method for Chemical Confirmation**

Test Item	Test Method	Test Instrument	MDL (mg/kg)	EU RoHS Limit (mg/kg)
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	10	100
Lead (Pb)	IEC 62321-5:2013	ICP-OES	10	1000
Mercury (Hg)	IEC 62321-4:2013	ICP-OES	10	1000
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 (non-metal)	UV-Vis	10	1000
	IEC 62321-7-1:2015 (metal)	UV-Vis	0.1( $\mu\text{g}/\text{cm}^2$ )	1000
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	10	1000
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	10	1000
Phthalates(DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS	50	1000

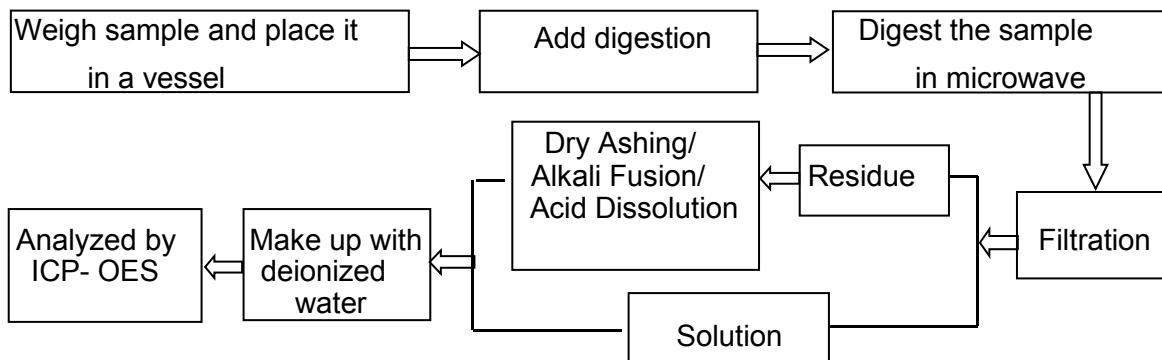
**Remark:** MDL = Method Detection Limit  
 N.D. = Not Detected (<MDL)  
 mg/kg = ppm = parts per million

**Test Process**

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

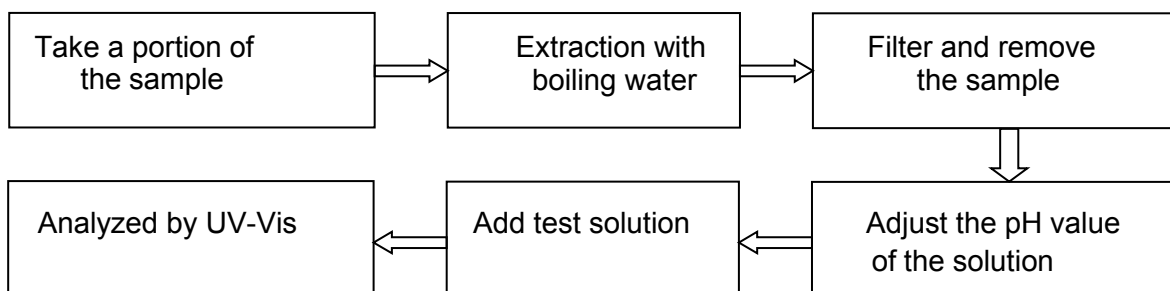


**2. Mercury(Hg)**



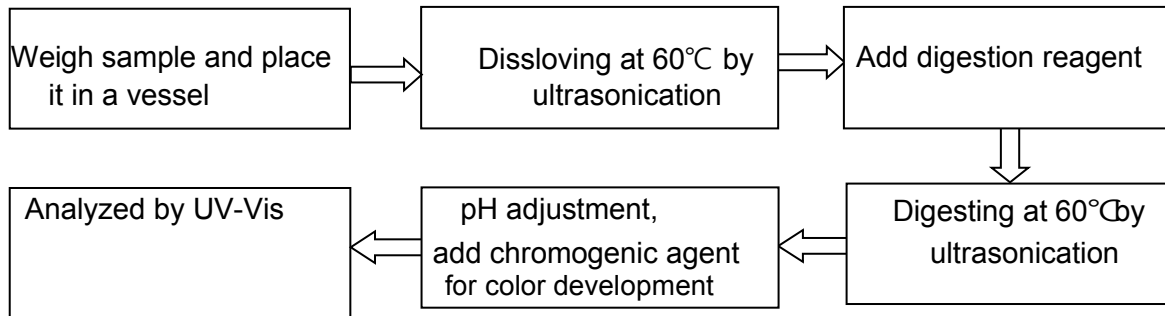
**3. Hexavalent Chromium (Cr (VI))**

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



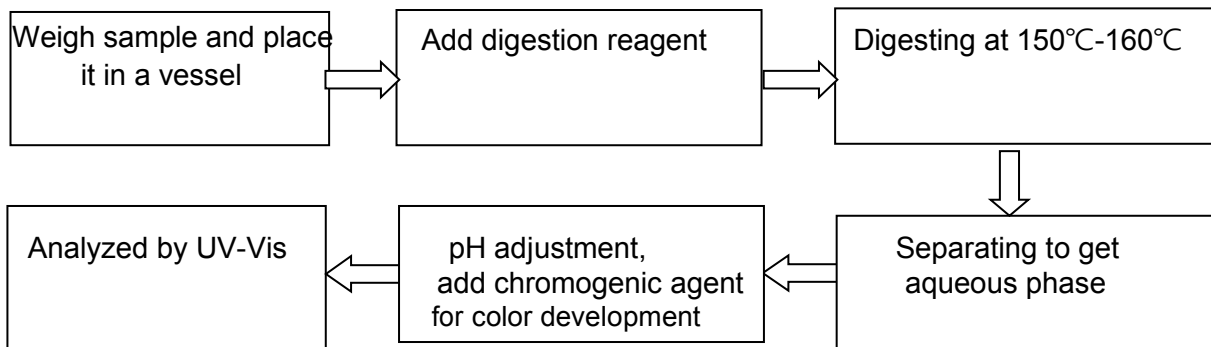
**(2) IEC 62321-7-2:2017**

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

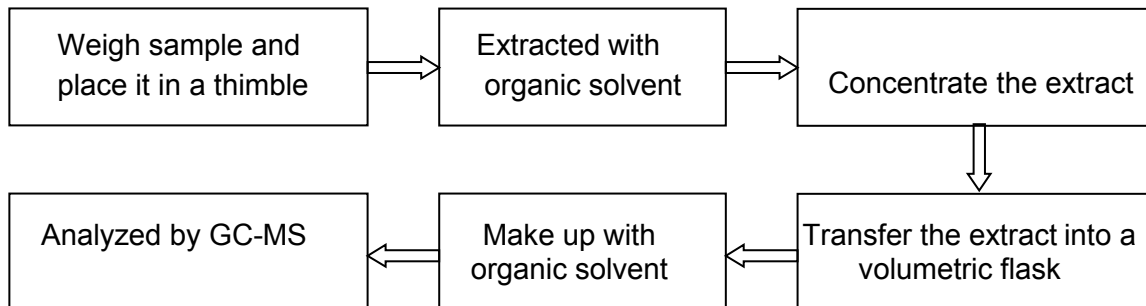


**(3) IEC 62321-7-2:2017**

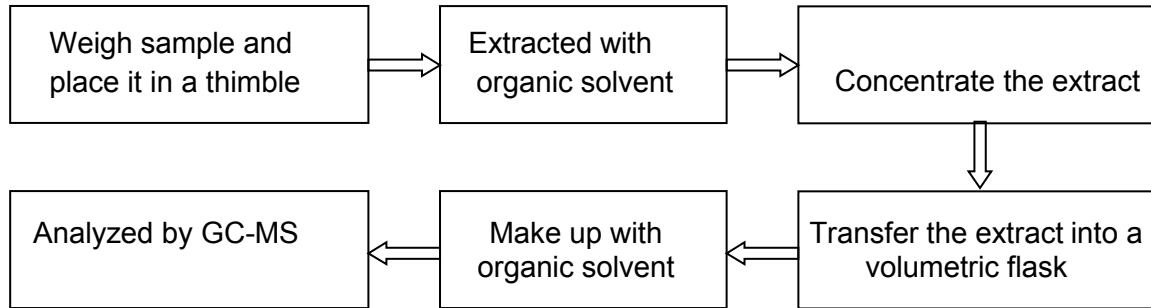
**Non-metal sample(s) (Others)**



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





**5. Phthalates(DBP/BBP/DEHP/DIBP)****Remark:**

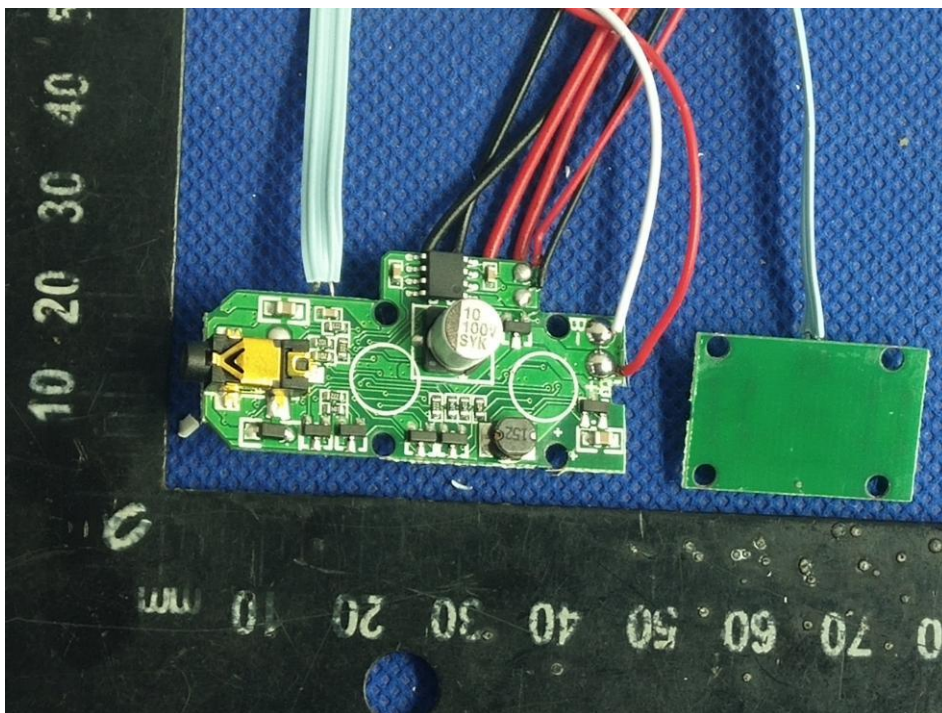
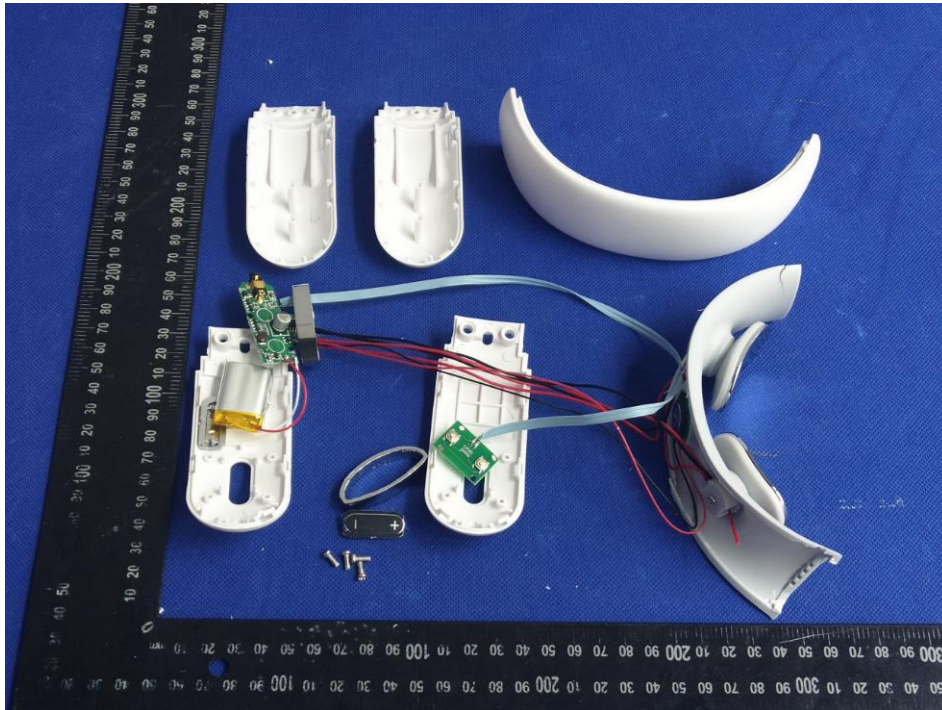
- Chemical confirmation tests were conducted to verify the inconclusive, Chromium (VI) ( $\text{Cr}^{6+}$ ), Polybrominated biphenyls (PBBS) and Polybrominated included in this report.
- As requested by the applicant, only components shown in this report were screened by XFR spectroscopy for 2011/65/EU & (EU) 2015/863, other components were not screened included in this report.

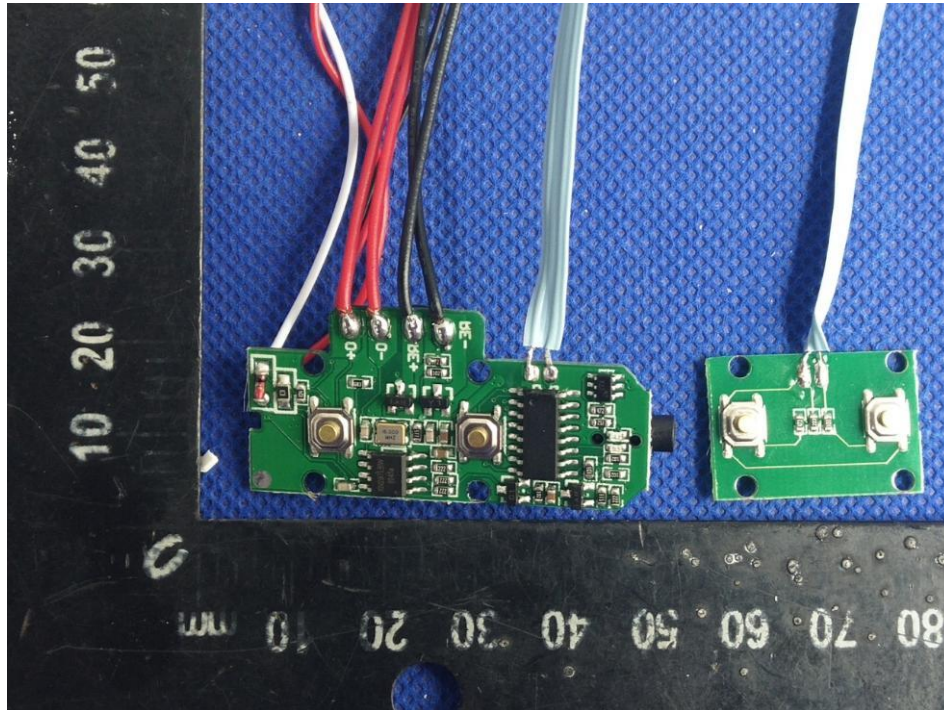
**Disclaimers:**

- This XRF Screening Report tests were reference purposes only. The applicant shall make its/his/her purposes.
- The results shown in this XRF screening Report will 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.
- Photo is included.

**Photograph of Sample**







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