

Test Report

Report No. BCTC-FYC19073199R

Date: Jul. 01, 2019

Applicant : Paul Stricker SA | REDA a.s.

Address : Núcleo Industrial de Murte de, Lote 5, 3060-372 Murte de - Portugal |
Hviezdoslavova 55d, 627 00 Brno - Czech Republic

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

Sample name : Bluetooth Speaker

Type /model : EV-S024, 97395

Manufacturer :

Address :

Sample received date : Jun. 20, 2019

Testing period : Jun. 20, 2019 - Jul. 01, 2019

Test requested : 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 chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted samples.
3. As specified by client, to test the Di-isobutyl phthalate(DIBP), Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Bis(2-ethyl(hexyl) phthalate)(DEHP)in the submitted sample(s).

According to the RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863

*****For more detailed information, please refer to the next page*****

Tested by

Xingping Li

Xingping Li



Approved by

Hanyao Chen

Hanyao Chen

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Test Method:

A. Screening test by XRF spectroscopy

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

Element	Limit of IEC 62321-3-1:2013. Unit (mg/kg)		MDL	
	Polymers and metals	Composite material	Polymers	Other material
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10 mg/kg	50 mg/kg
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma)$ $\leq OL$	$LOD \leq (50-3\sigma) < X < (150+3\sigma)$ $\leq OL$	10 mg/kg	50 mg/kg
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10 mg/kg	50 mg/kg
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$	10 mg/kg	50 mg/kg
Br	$BL \leq (300-3\sigma) < X$	$BL \leq (250-3\sigma) < X$	10 mg/kg	50 mg/kg

Note:

-BL = Under the XRF screening limit

-OL = Further 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

-"--" = Not regulated.

B. Chemical Test

Test Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000 mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-1:2015 Ed.1.0	UV-VIS	--	1000 mg/kg
	IEC 62321-7-2:2017 Ed.1.0		8 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg
Phthalates	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg

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Test Result(s):

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
1	Silver-gray cloth	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
2	Black plastic shell	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	398	N.D.	
3	Brown cloth	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
4	Black magnet	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
5	Silver metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
6	Black metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	

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7	Silver screw	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
8	Silver metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	106935	Negative	
		Br(PBBs&PBDEs)	/	/	
9	Crystal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
10	Silver metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
11	Silver metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
12	Silver metal (Buzzer)	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
13	Tin solder	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	

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Tested Item(s)	Results Unit (mg/kg)		
	1	2	3
Di-isobutyl phthalate(DIBP) CAS #:84-69-5	N.D.	N.D.	N.D.
Dibutyl phthalate(DBP) CAS #:84-74-2	N.D.	N.D.	N.D.
Benzylbutyl phthalate(BBP) CAS #:85-68-7	N.D.	N.D.	N.D.
Bis(2-ethyl(hexyl) phthalate)(DEHP) CAS #:117-81-7	N.D.	N.D.	N.D.

Note:

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-" / " = Not conducted.

-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.1 μ g/cm² with 50cm² sample surface area used.

-Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than 0.13 μ g/cm² with 50cm² sample surface area used.

-The data in this report are the copy of this report:BCTC-FYC19062774R.

Remark:

- The screening results are only used for reference.

- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

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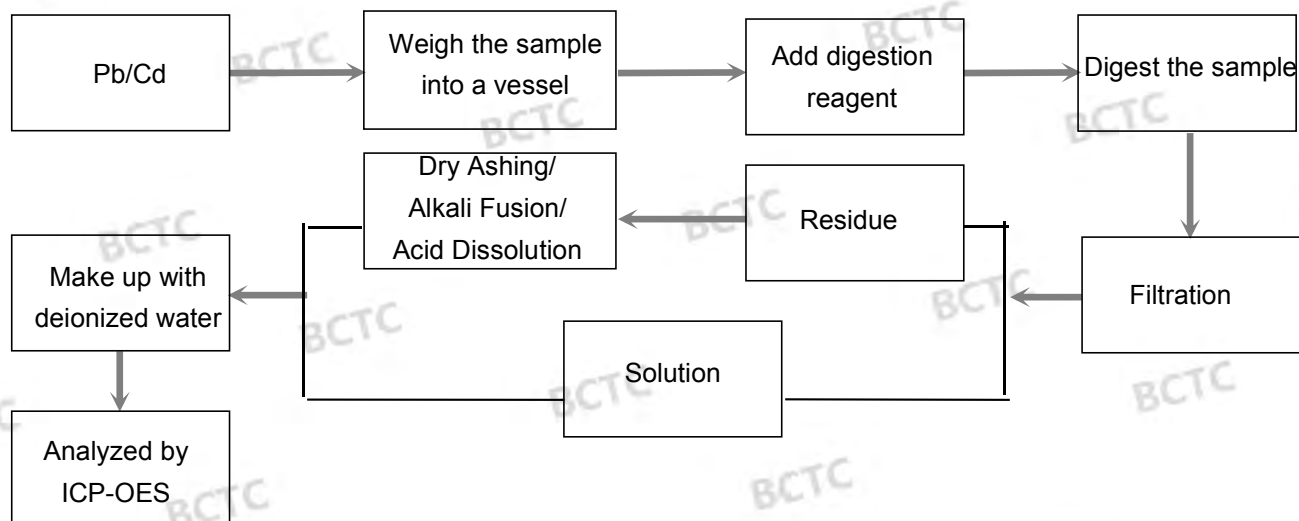
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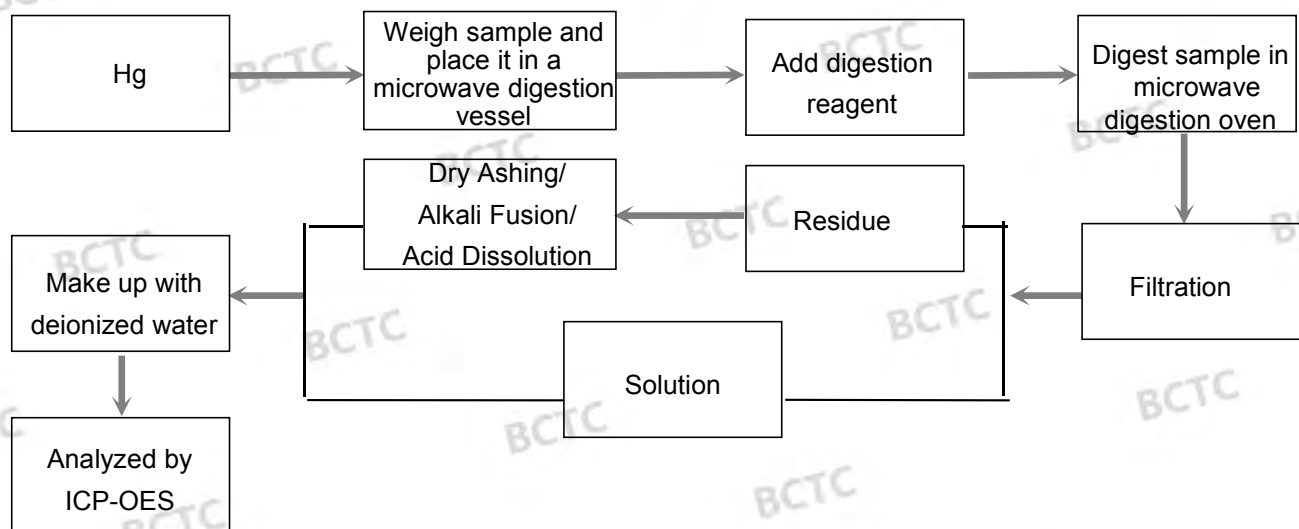
Test Process:

The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

◆IEC 62321-5:2013 Ed.1.0



◆IEC 62321-4:2013+AMD1:2017

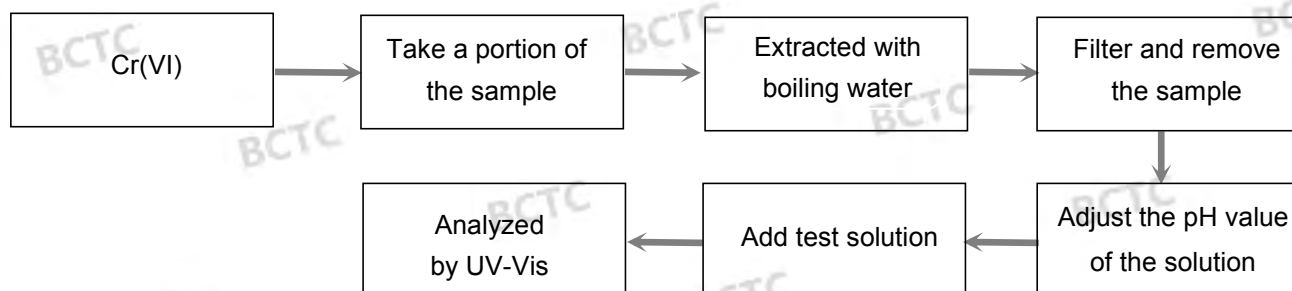


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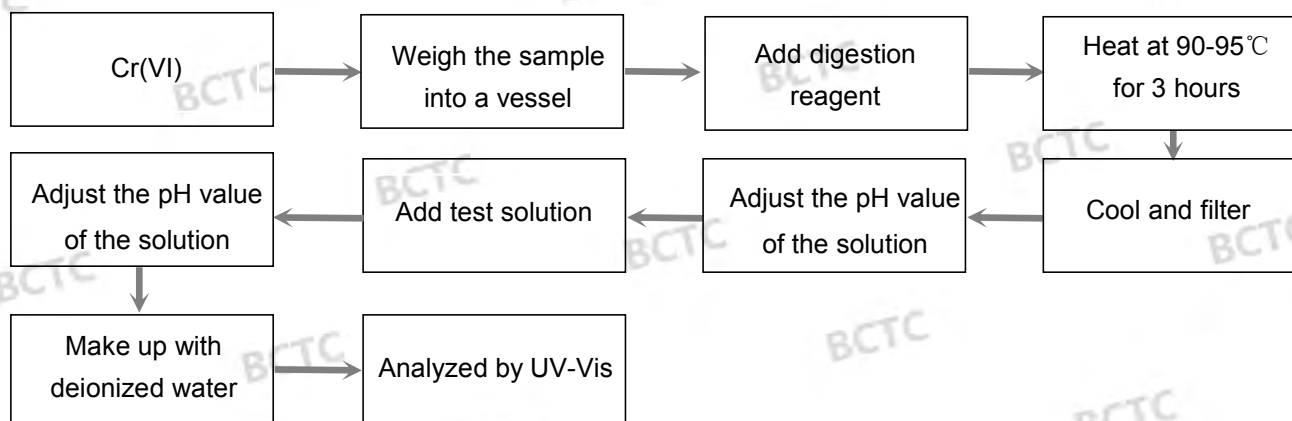
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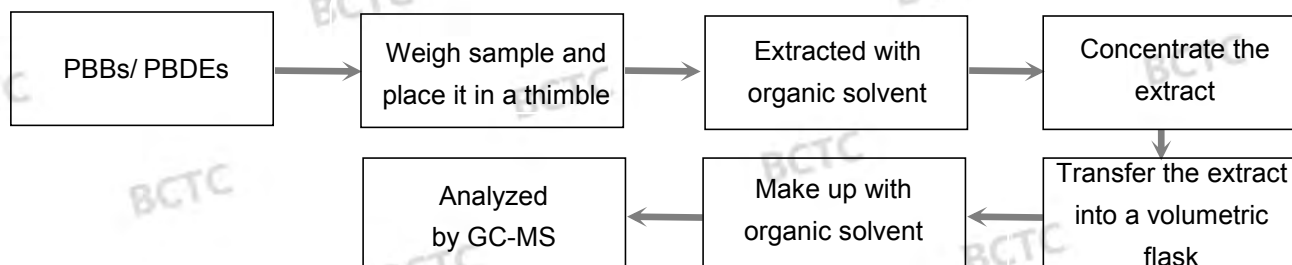
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◆IEC 62321-7-2:2017 Ed.1.0



◆IEC 62321-6:2015 Ed.1.0

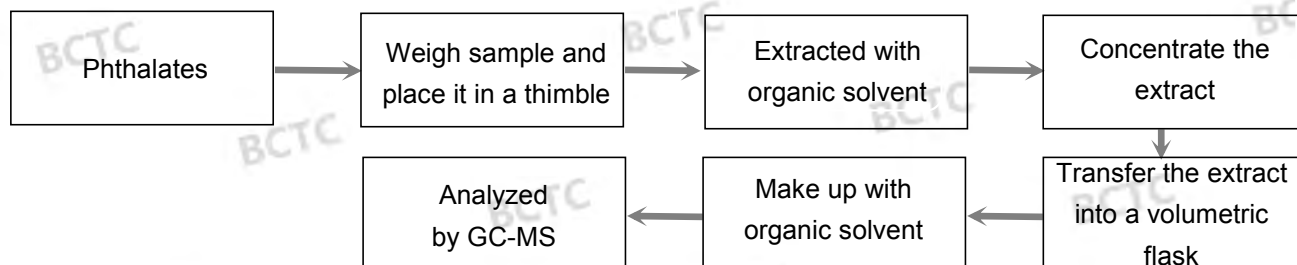


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◆IEC 62321-8:2017 Ed.1.0



Photograph of Sample



Fig.1

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Fig.2

Photo(s) of the tested component(s)



Fig.3

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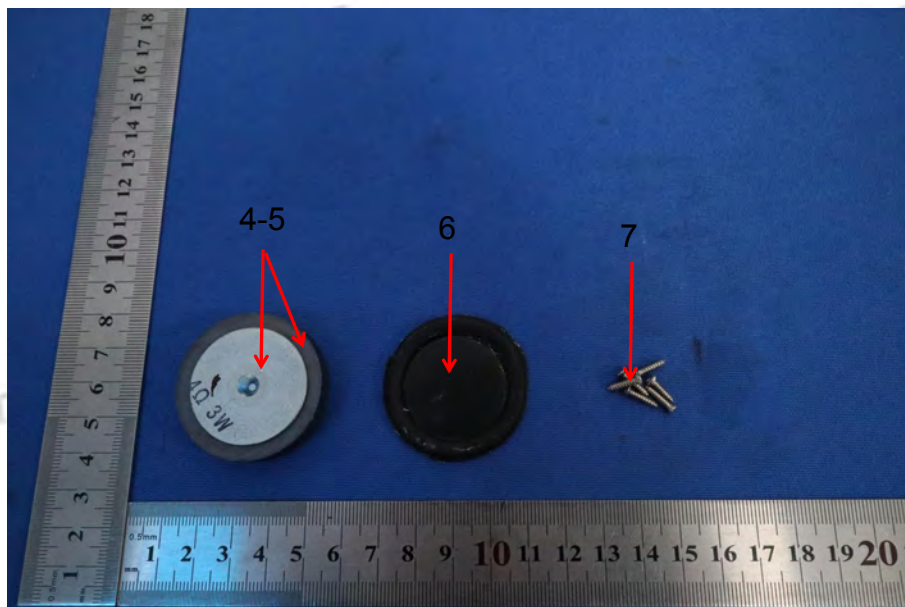


Fig.4

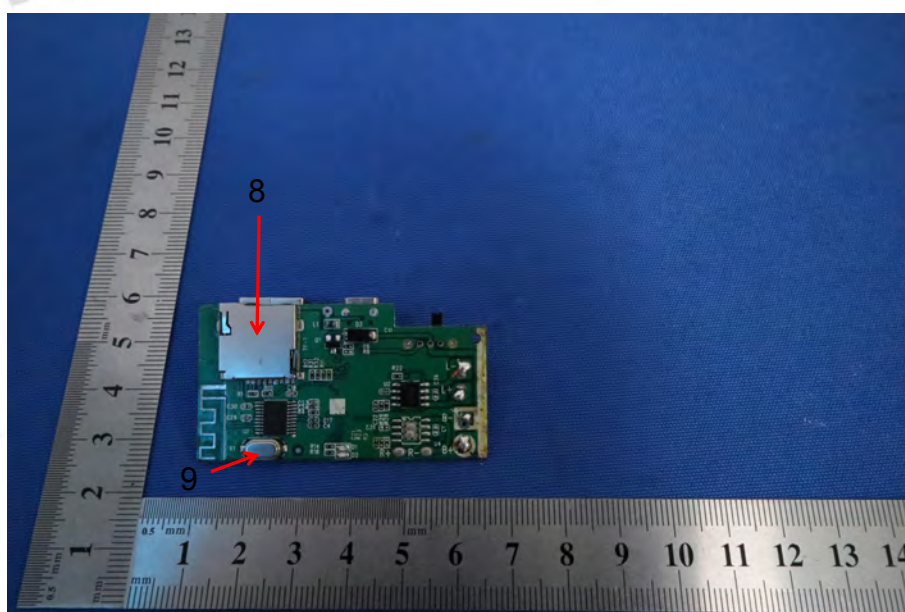


Fig.5

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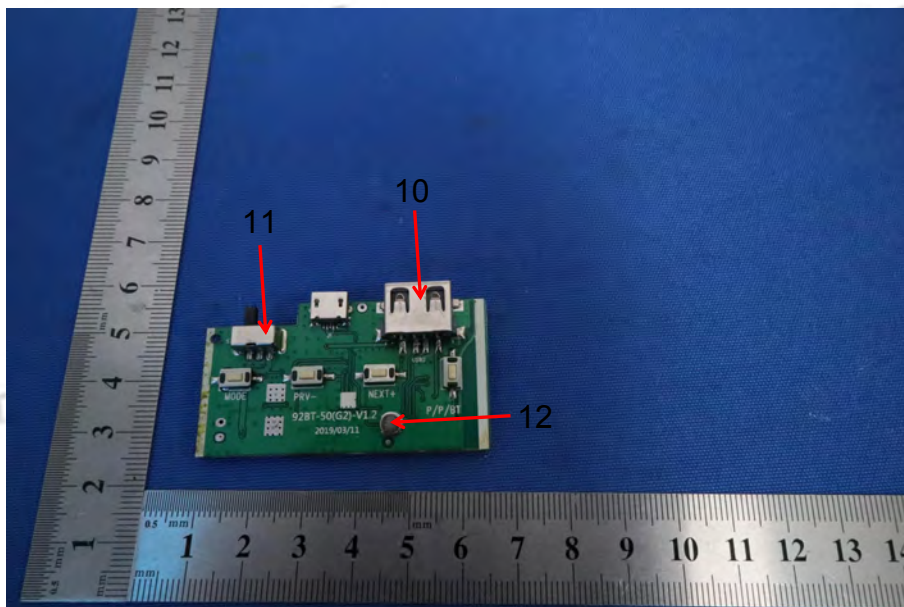


Fig.6

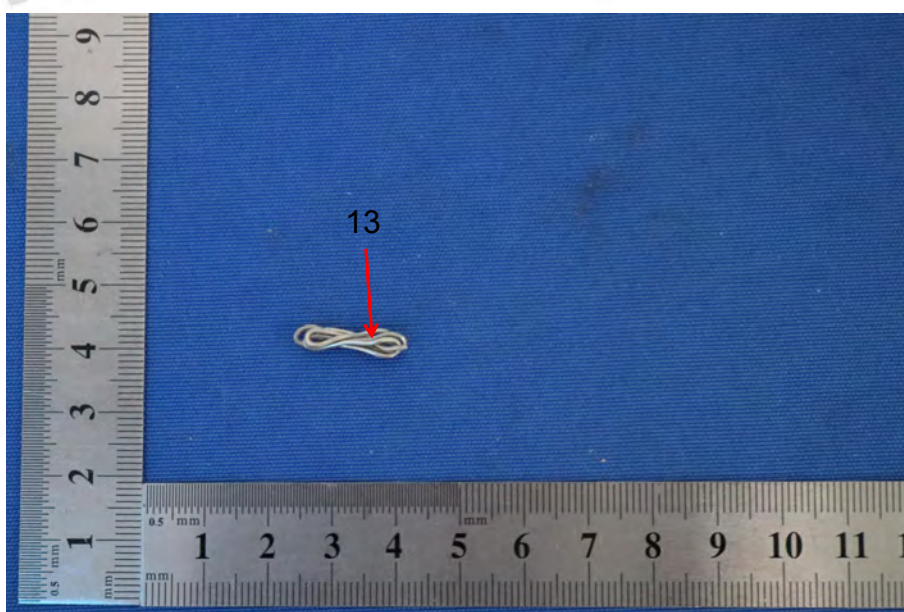


Fig.7

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STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without stamp of laboratory.
4. The test report is invalid without signature of person(s) testing and authorizing.
5. The test process and test result is only related to the Unit Under Test.
6. The quality system of our laboratory is in accordance with ISO/IEC17025.
7. If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address: BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road,
Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China
P.C.: 518103

TEL: 400-788-9558

FAX: 0755-33229357

Internet: <http://www.bctc-lab.com>

E-Mail: bctc@bctc-lab.com.cn

***** END OF REPORT *****