



# TEST REPORT

Report No.: STR20106041R

Date: 2020-10-06

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Applicant : IPOWER CORPORATION

Applicant Address : 345 E. Colorado Blvd. #202, Pasadena, CA 91101, USA.

The following sample was submitted by the client as:

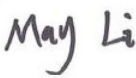
Manufacturer : Zhongshan Taidu Technology Co., Ltd.  
Address : 81, Renmin Road, Minzhong Town, Zhongshan City, Guangdong (528441), China  
Sample Description : Li-ion Battery  
Style/Item No. : IP9V-800  
Brand Name : IPOWERUS  
Sample Receiving Date : Oct. 02, 2020  
Test Period : Oct. 02, 2020 to Oct. 06, 2020

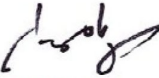
### Test Requested:


As requested by the applicant, test(s) was/were performed as below:

Test Summary	Conclusion
1 European Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (XRF screening and chemical confirm)	PASS

Test Results: Please refer to following page(s).

Tested by:   
May li

Reviewed by:   
Boly Peng

Approved by:   
Jandyso

Declaration:

- (1) The report shall not be reproduced partly without the written approval of the laboratory, except in full produced.
- (2) All the results shown in the report apply to the tested sample, any erasion on the report is invalid
- (3) All tested sample will be kept for one month, if there is any doubt about the test result, please inform within this period



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## RoHS hazardous substances test

Test method:

IEC 62321-3-1:2013, XRF screening

IEC 62321-4-2013 for Hg, analyzed by ICP-OES

IEC 62321-5-2013 for Cd and Pb, analyzed by ICP-OES

IEC 62321-7-2:2017 method 7.1 and/or IEC 62321-7-1:2015 for Cr<sup>6+</sup>, analyzed by UV-VIS

IEC 62321-6-2015 for PBBs and PBDEs, analyzed by GC-MS

### 1. XRF results:

No.	Sample name	Part name	Sample Description	Results				
				Pb	Cd	Hg	Cr	Br
1	Li-ion Battery	Shell	White plastic	BL	BL	BL	BL	IN
2		Tape	White tape	BL	BL	BL	BL	BL
3		Block shot	Black plastic	BL	BL	BL	BL	IN
4		Positive pole	Silvery metal	BL	BL	BL	BL	NA
5		Negative pole	Silvery metal	BL	BL	BL	BL	NA

### 2. Chemical confirm results:

Test Item(s)	Result (mg/kg)					Limit (mg/kg)
	1	3	---	---	---	
Mono-PBB	ND	ND	ND	ND	ND	--
Di-PBB	ND	ND	ND	ND	ND	--
Tri-PBB	ND	ND	ND	ND	ND	--
Tetra-PBB	ND	ND	ND	ND	ND	--
Penta-PBB	ND	ND	ND	ND	ND	--
Hexa-PBB	ND	ND	ND	ND	ND	--
Hepta-PBB	ND	ND	ND	ND	ND	--
Octa-PBB	ND	ND	ND	ND	ND	--
Nona-PBB	ND	ND	ND	ND	ND	--
Deca-PBB	ND	ND	ND	ND	ND	--
<b>Sum of PBBs</b>	ND	ND	ND	ND	ND	1000
Mono-PBDE	ND	ND	ND	ND	ND	--
Di- PBDE	ND	ND	ND	ND	ND	--
Tri- PBDE	ND	ND	ND	ND	ND	--
Tetra- PBDE	ND	ND	ND	ND	ND	--
Penta- PBDE	ND	ND	ND	ND	ND	--
Hexa- PBDE	ND	ND	ND	ND	ND	--



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Hepta- PBDE	ND	ND	ND	ND	ND	--
Octa- PBDE	ND	ND	ND	ND	ND	--
Nona- PBDE	ND	ND	ND	ND	ND	--
Deca- PBDE	ND	ND	ND	ND	ND	--
<b>Sum of PBDEs</b>	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	--

**Remark:**

1. BL = below limit
2. OL = over limit
3. IN = inconclusive, chemical confirm test is recommended
4. NA = not applicable
5. mg/kg = milligram per kilogram = ppm
6. Method Detection Limit (MDL) :10mg/kg for Pb, Cd, Hg and Cr<sup>6+</sup>; 10mg/kg for PBB and PBDE
7. ND = not detected
8. Negative = The Cr<sup>6+</sup> concentration is below the limit of quantification. The coating is considered a non-Cr<sup>6+</sup> based coating.
9. Positive = The Cr<sup>6+</sup> concentration is above the limit of quantification and the statistical margin of error, The sample coating is considered to contain Cr<sup>6+</sup>.

**Note:**

1. When perform screening tests, it is the result on total Br while test item on restricted substances is PBBs/PBDEs, it is the result on total Cr while test item on restricted substances is Cr<sup>6+</sup>.
2. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr<sup>6+</sup>) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration falls into the inconclusive area according to IEC 62321-3-1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL≤(70-3σ)<X<(130+3σ) ≤OL	BL≤(70-3σ)<X<(130+3σ) ≤OL	LOD<X<(150+3σ) ≤OL
Pb	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Hg	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Br	BL≤(300-3σ)<X	---	BL≤(250-3σ)<X
Cr	BL≤(700-3σ)<X	BL≤(700-3σ)<X	BL≤(500-3σ)<X

3. The XRF screening test for RoHS elements. The reading may be different to the actual content in the sample be of non-uniformity composition.



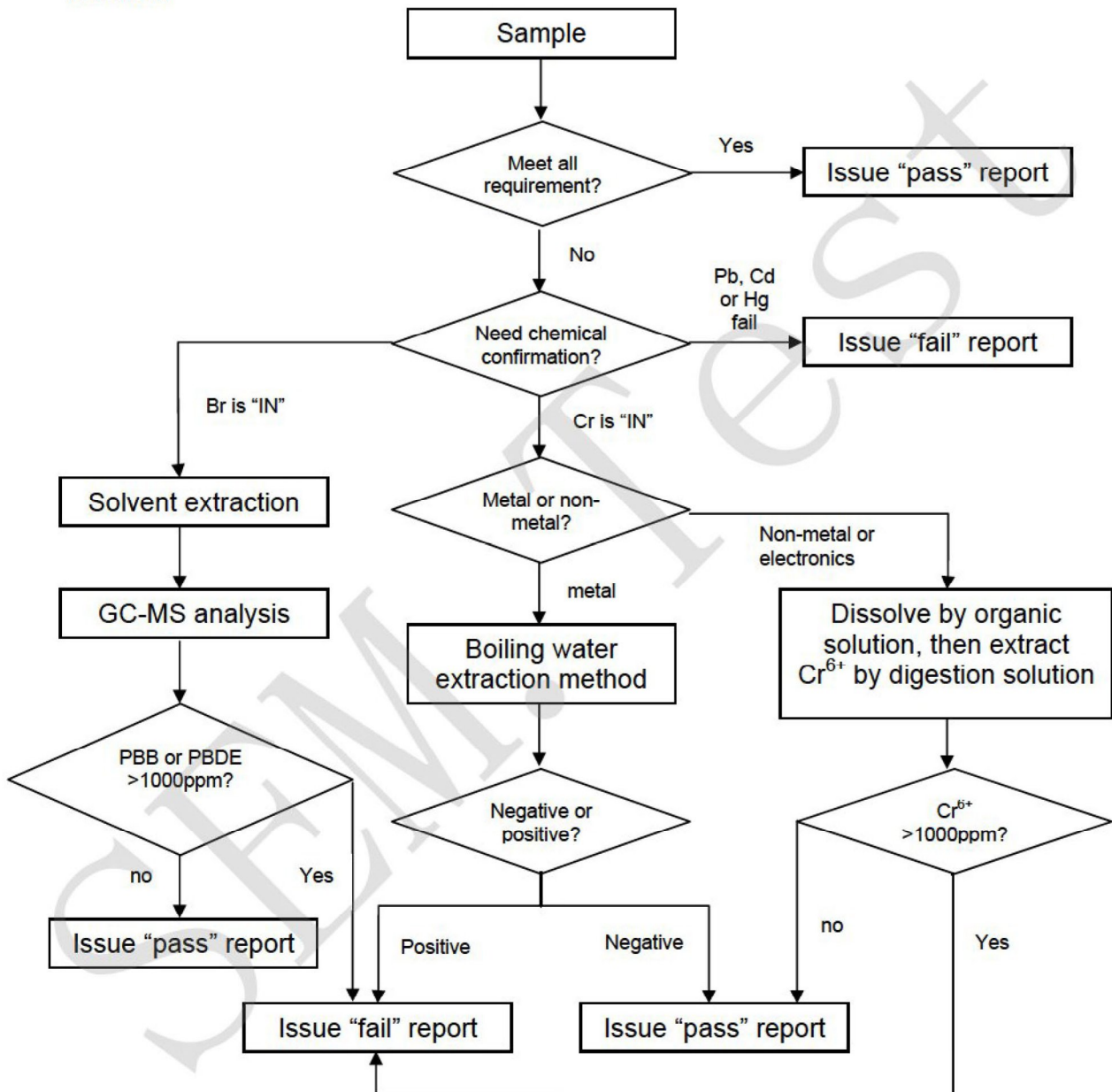
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## Test flow:



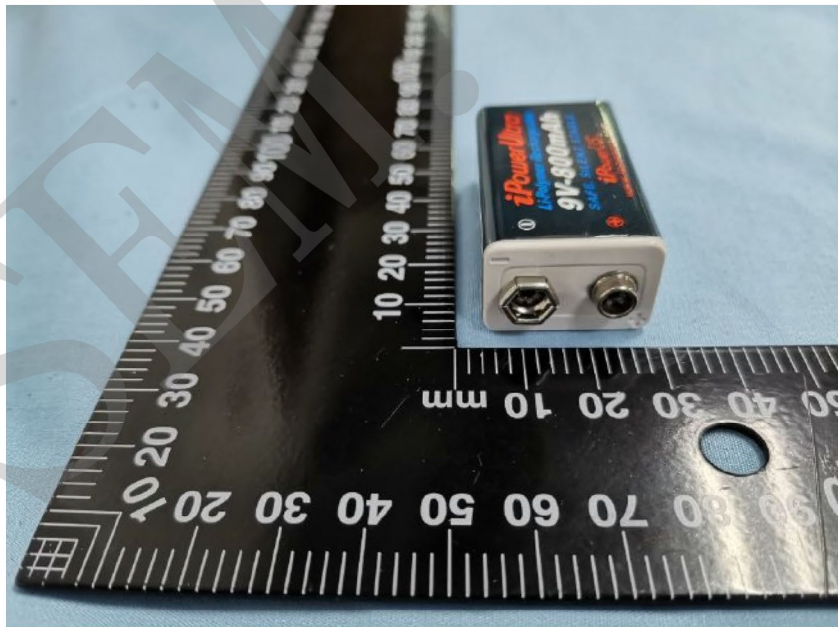
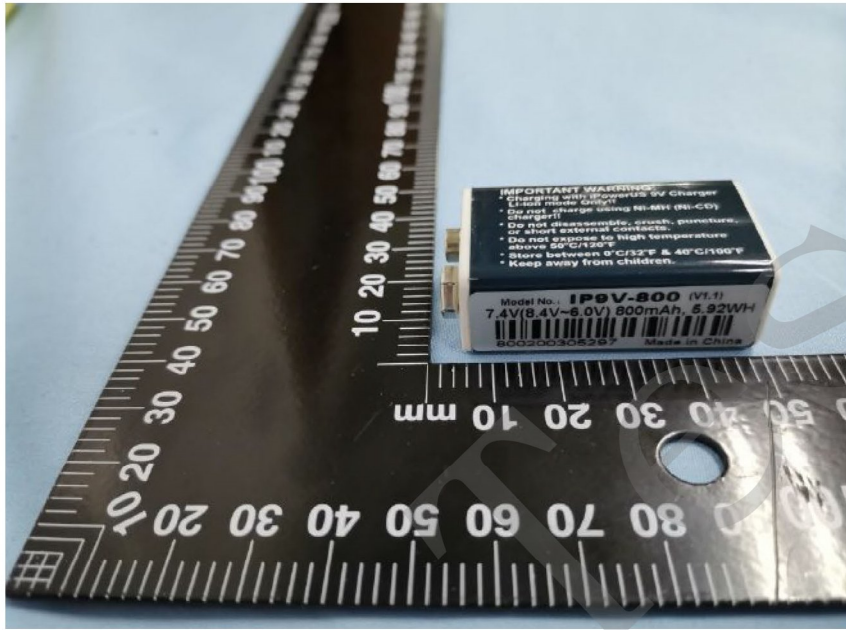
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Tested sample photo:



--- End of Report ---