TEST REPORT

Applicant : Shenzhen Honcell Energy Co., Ltd.

Applicant Address : 612b, Bldg. A, Weidonglong Industrial Zone, Meilong Ave.194#, Longhua New District, Shenzhen, 518109, China.

The following sample was submitted by the client as:

Manufacturer	:	Shenzhen Honcell Energy Co., Ltd.
Address	:	612b, Bldg. A, Weidonglong Industrial Zone, Meilong Ave.194#, Longhua New District, Shenzhen, 518109, China.
Sample Description	:	Lithium-ion polymer battery
Style/Item No.	:	HCP 803040ZC
Brand Name	:	HCP
Sample Receiving Date	:	Nov. 11, 2016
Test Period	:	Nov. 11, 2016 to Nov. 15, 2016

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 62321:2008 Annex C and/or IEC 62321-7-1:2015 for Cr^{6+}, analyzed by UV-VIS

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

1. XRF results:

No.	Name of the sample	Part name	Sample Description	Results				
				Pb	Cd	Hg	Cr	Br
1-1-1	Li-ion Cylindrical Battery	Tape	Blue tape	BL	BL	BL	BL	BL
1-2-1		Positive pole	Silvery metal	BL	BL	BL	BL	NA
1-3-1		Negative electrode	Silvery metal	BL	BL	BL	BL	NA
1-4-1		Battery material	Black material	BL	BL	BL	BL	BL
1-5-1		Soldering tin	Silvery metal	BL	BL	BL	BL	NA
1-6-1		PCB	PCB	BL	BL	BL	BL	**IN**
1-7-1		Aluminum case	Aluminum case	BL	BL	BL	BL	NA
1-8-1		Wire	Black plastic	BL	BL	BL	BL	BL
1-8-2			Red plastic	BL	BL	BL	BL	BL
1-8-5			Silver metal core	BL	BL	BL	BL	NA
1-9-1		Socket	White plastic	BL	BL	BL	BL	BL
1-9-2			Copper metal	BL	BL	BL	BL	NA
1-10-1		IC	Silvery metal	BL	BL	BL	BL	NA
1-10-2			Black plastic	BL	BL	BL	BL	BL

2. Chemical confirm results:

Test Item(s)	Result (mg/kg)					Limit (mg/kg)
	1-6-1	--	--	--	--	
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	--
Sum of PBBs	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	--
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	--
Sum of PBDEs	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^{6+}; 10mg/kg for PBB and PBDE
7. ND = not detected
8. Negative = The Cr^{6+} concentration is below the limit of quantification. The coating is considered a non-Cr^{6+} based coating.
9. Positive = The Cr^{6+} concentration is above the limit of quantification and the statistical margin of error, The sample coating is considered to contain Cr^{6+}.

Note:

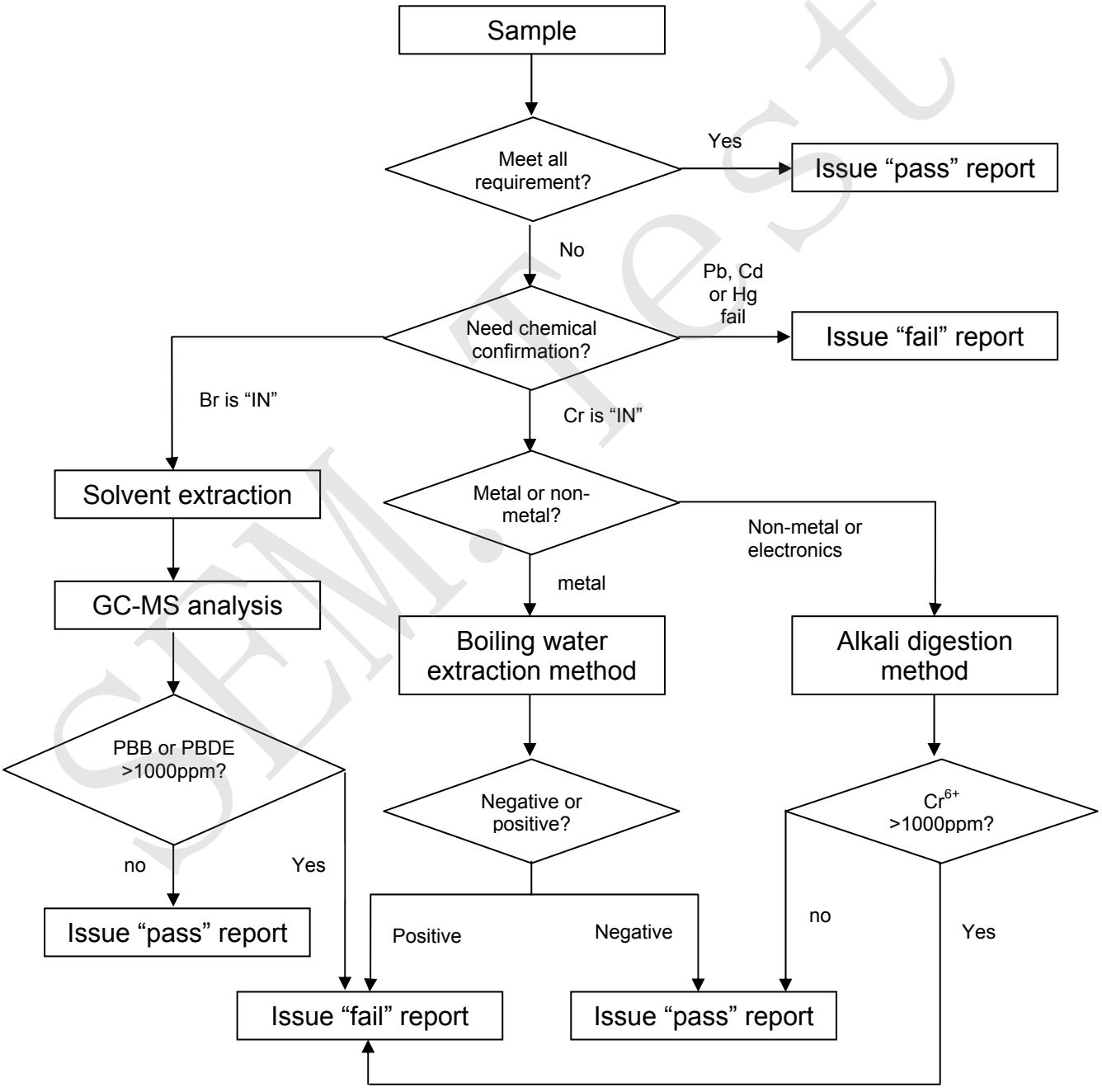
1. When perform screening tests, it is the result on total Br while test item on restricted substances is PBBs/PBDEs, it is the result on total Cr while test item on restricted substances is Cr^{6+}.
2. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) 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.

Test flow:



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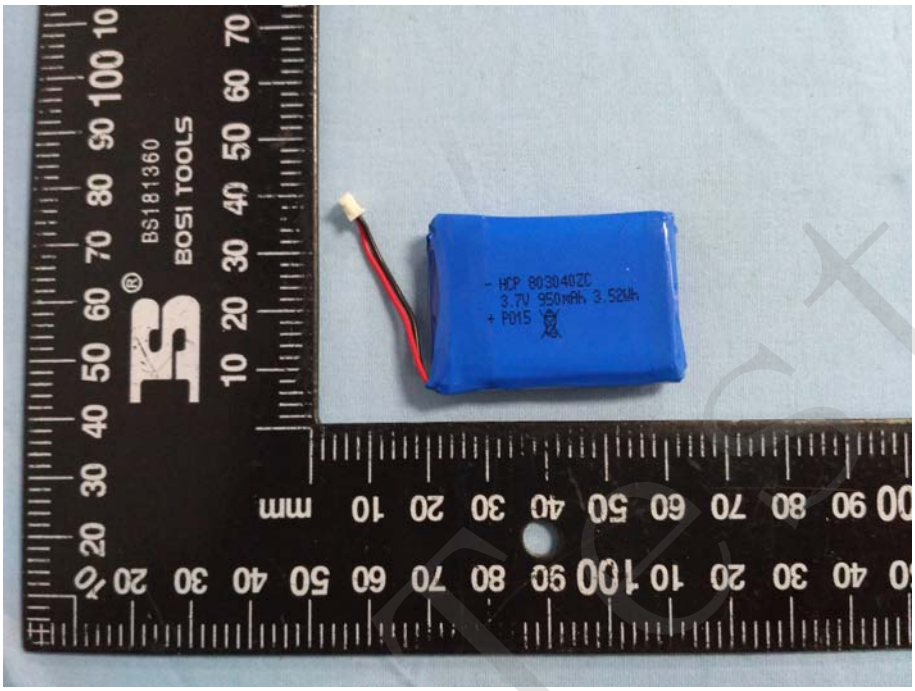
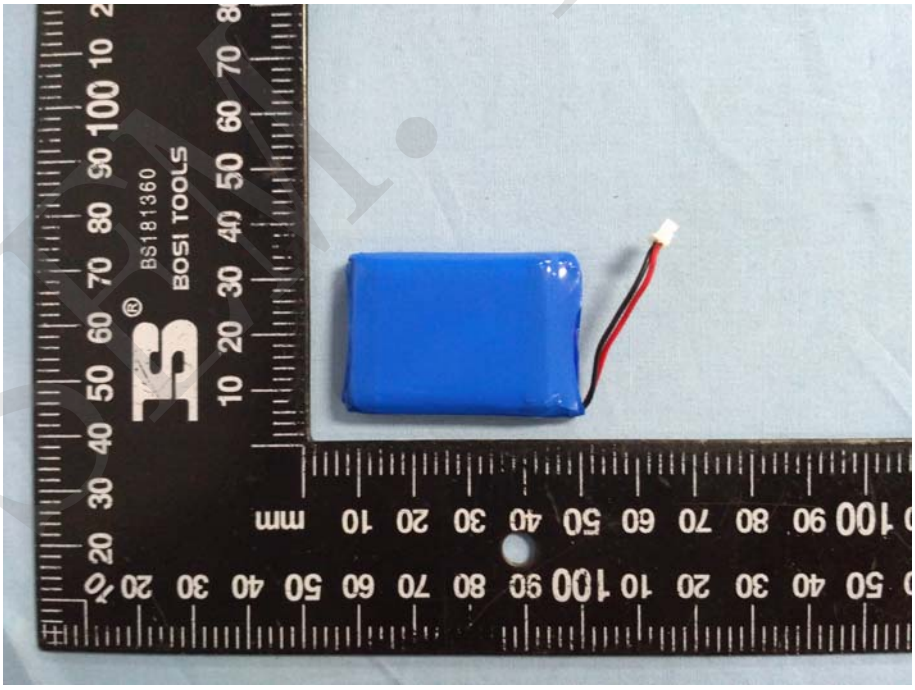
Tested sample photo:





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