NPS

TEST REPORT

Applicant :
Address :

Report on the submitted sample said to be:

Sample Name : Power Bank
Sample No. : UP-1005
Trade mark

Manufacturer :
Address :

Sample Received Date : Apr.13, 2018
Testing Period : Apr.13, 2018 to Apr.18, 2018

Test Request :

1. As specified by client, test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs) and Polyb rominated Diphenyl Ethers(PBDEs) content in the submitted samples in accordance with RoHS 2011/65/EU.

Conclusion:
Pass

Test Result(s): Please refer to the following page(s);

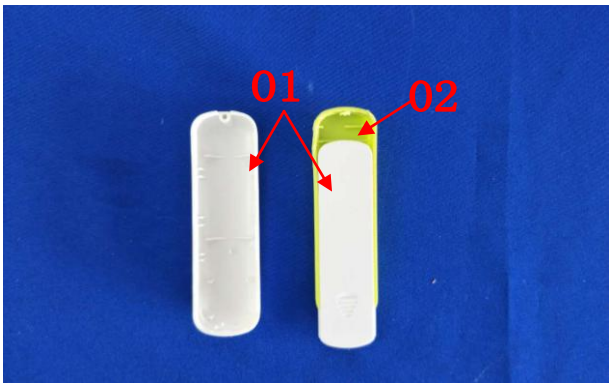
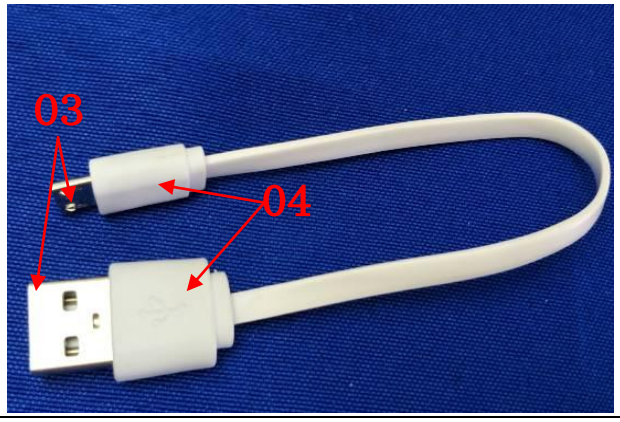
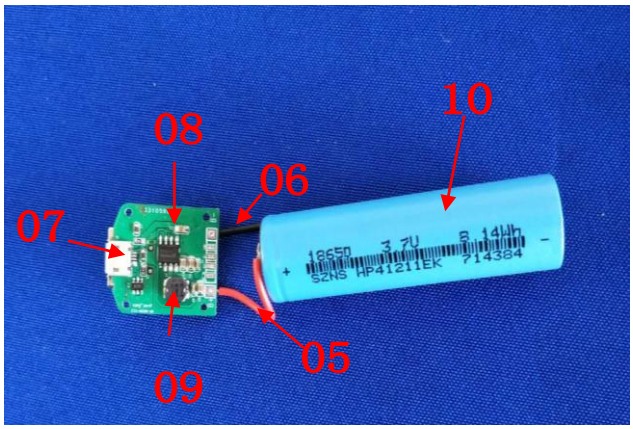
Test Method: Please refer to the following page(s);

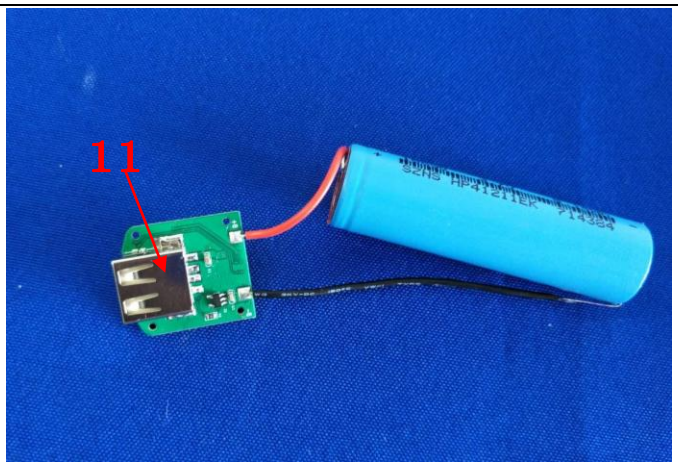
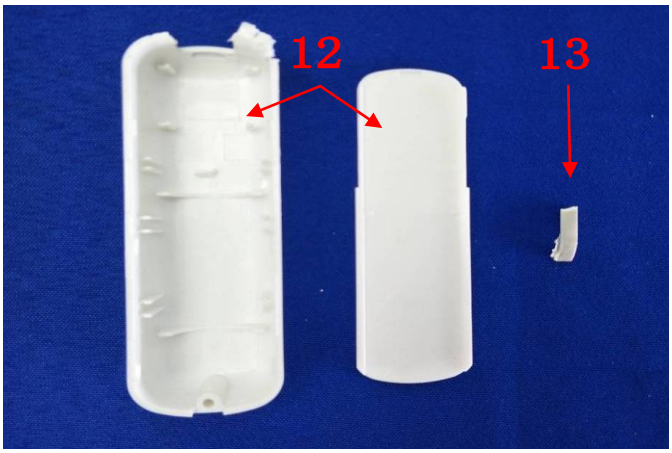
Wrote by: _____ Reviewed by: _____

Approved by: _____ Date: 2018-04-20

NPS LABORATORY COMPANY LIMITED * CERTIFICATION *

Test Item Description and Photo List:

Test Item(s)	Sample Photo(s)	Item / Component Description(s)
01		White plastic shell
02		Golden yellow plastic shell
03		Metal pin
04		White plastic wire coating
05		Red wire coating
06		Black wire coating
07		Metal pin
08		PCB board
09		Black plastic
10		Battery

11		USB port
12		White plastic shell
13		Grey plastic shell

TEST RESULT

European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	**Conclusion**
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
03	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	PASS
04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
06	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
07	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	PASS
08	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	PASS
09	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
10	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	PASS
11	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	PASS
12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
13	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS

Note / Key: N.D. = Not detected; NA = Not requested; % = percent;
10000 mg/kg = 1 %; mg/kg = milligram(s) per kilogram = ppm = part(s) per million;
Detection Limit: See Appendix. Remark(s):

- The testing approach is listed in table of Appendix.
- Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Council Directive 2011/65/EU, Article 4(1).
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Council Directive 2011/65/EU, Article 5 “Adaptation of the Annexes to scientific and technical progress”, exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
- Tested part(s) was/were specified by client.

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [for European Council Directive 2011/65/EU]:						
No.	**Name of Analytes**	**Detection Limit (mg/kg)**				**Maximum Allowable Limit (mg/kg)**
		X-ray fluorescence (XRF)[a]			**Wet Chemistry**	
		Plastic	**Metallic / glass / ceramic**	**Others**		
1	Lead (Pb)	100	200	200	10[b]	1000
2	Cadmium (Cd)	50	50	50	10[b]	100
3	Mercury (Hg)	100	200	200	10[c]	1000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3[g] /10[d] See [e, i]	1000 Negative[i]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50 [f]	Sum 1000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50 [f]	Sum 1000

XRF screening limits for different materials:					
Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
Metal	P≤70<X<130≤F	P≤700<X	P≤700<X<1300≤F	P≤700<X<1300≤F	NA
Polymers	P≤70<X<130≤F	P≤700<X	P≤700<X<1300≤F	P≤700<X<1300≤F	P≤300<X
Composite material	P≤50<X<150≤F	P≤500<X	P≤500<X<1300≤F	P≤500<X<1300≤F	P≤250<X

P=Pass; F=Fail; X=Inconclusive result

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [for European Council Directive 2011/65/EU]:

NA = Not applicable

[a] Test method with reference to IEC 62321-3-1:2013.

[b] Test method with reference to IEC 62321-5:2013.

[c] Test method with reference to IEC 62321-4:2013.

[d] Polymers and Electronic-Test method with reference to European standard IEC 62321:2008 Annex C.

[e] Metal-Test method with reference to European standard IEC 62321:2008 Annex B[h].

[f] Test method with reference to European standard IEC 62321:2008 Annex A.

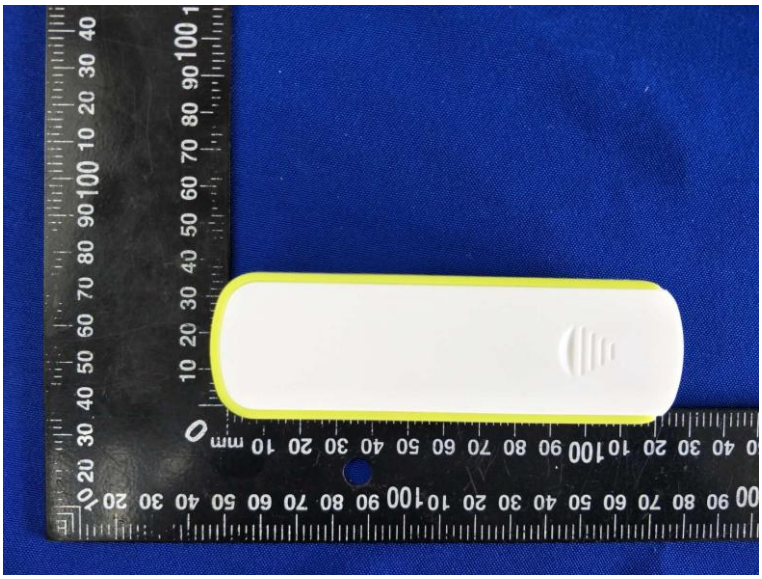
[g] Leather-Test method International standard ISO 17075:2007

[h] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples.

[i] Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Council Directive 2011/65/EU, Article 4(1).

Testing Approach [Compliance Test for European Council Directive 2011/65/EU]:	
The testing approach was with reference to the following document(s).	
1	International standards IEC 62321-1:2013 and IEC 62321-2:2013
2	"RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
3	"RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
4	"Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

Sample Photo(s)



****End of Report****