CONSUMER PRODUCTS SERVICES DIVISION

FLASHBAY ELECTRONICS

Technical Report: **(8517)327-0002** January 12, 2018
Date Received: January 08, 2018

LEVIN
FLASHBAY ELECTRONICS
BLGD B & C XI FENG CHENG IND ZONE,
NO.2 FUYUAN ROAD HE PING,
VILLAGE, FUYONG TOWN,
SHENZHEN, CHINA

Sample Description:	BLUETOOTH HEADPHONE 1.) A 2.) B 3.) C 4.) D		
Vendor:	N/A	Sample Size:	12
Manufacturer:	N/A	Style No(s):	MAMBO(MO), NAPPA(NP), CRAFT(CC), INDIE(ID)
Buyer:	N/A	SKN/SKU No.:	N/A
Labeled Age Grade:	N/A	PO No.:	N/A
Appropriate Age Grade:	N/A	Ref #:	N/A
Client Specified Age Grade:	N/A	Country of Origin:	N/A
Tested Age Grade:	ADULT	Assortment No.:	N/A
UPC Code:	N/A		

EXECUTIVE SUMMARY:

The sample(s) MEET the following requirement(s):

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

- Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Note: The amendment will be effective on 22 July 2019. For medical devices and control instruments, effective date will be 22 July 2021.

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AC/dk

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RESULTS:

Compliance Test - European Parliament and 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.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
1	Black soft plastic / deep blue fabric	Headphone	A-D
2	Grey printed black plastic	Headphone	A-D
3	White foam	Inner headphone	A-D
4	Red / black printed white plastic	Case, headphone	A-D
5	White soft plastic / glue	Headphone	A
6	Light white soft plastic	Headphone	B
7	White soft plastic	Glue	B
8	Transparent plastic	Washer, headphone	B
9	Brown wood	Headphone	C
10	Silvery metal	Headphone	D
11	Translucent soft plastic	Adhesive tape	A-D
12	Black plastic	Headphone	A-D
13	Light blue printed transparent plastic / glue	Sticker	A-D
14	Grey foam / glue	Inner headphone	A-D
15	Black soft plastic	Inner case, headphone	A-D
16	Deep grey foam	Inner case, headphone	A-D
17	Silvery metal	Shaft	A-D
18	White soft plastic	USB	A-D
19	White soft plastic	Sleeve, wire jacket	A-D
20	Silver plated coppery metal	Case, USB	A-D
21	White plastic	Inner USB	A-D
22	Silver plated golden metal	Connector, USB	A-D
23	Silvery solder	Connector, USB	A-D
24	Silvery metal	Small case, USB	A-D
25	Black plastic	Inner small case, USB	A-D
26	Silver plated golden metal	Connector, small case, USB	A-D
27	Silvery solder	Connector, small case, USB	A-D
28	Bright white soft plastic	Case, line	A-D
29	Silver plated golden metal	Connector, line	A-D
30	Silvery solder	Connector, line	A-D
31	Red soft plastic	Thin wire jacket	A-D
32	White soft plastic	Thin wire jacket	A-D
33	Black soft plastic	Thin wire jacket	A-D
34	Red soft plastic	Thick wire jacket	A-D
35	White soft plastic	Thick wire jacket	A-D

RESULTS:

Compliance Test - European Parliament and 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.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
36	Black soft plastic	Thick wire jacket	A-D
37	Black soft plastic	Wire jacket	A-D
38	Red soft plastic	Wire jacket	A-D
39	Pink / silver plated coppery metal	Wire	A-D
40	Black soft plastic	Sleeve, case, MIC	A-D
41	Silvery metal	Case, MIC	A-D
42	Silver plated golden metal	Ring, MIC	A-D
43	White plastic	Washer, MIC	A-D
44	Translucent blue soft plastic	Washer, MIC	A-D
45	Silver plated golden metal	Plate, MIC	A-D
46	Blue coated brown plastic / coppery metal	MIC PCB	A-D
47	Silvery solder	MIC PCB	A-D
48	Transparent plastic	Diaphragm, speaker	A-D
49	Coppery metal	Coil, speaker	A-D
50	Black plastic / glue	Case, speaker	A-D
51	Silvery metal	Ring, speaker	A-D
52	Silvery magnet	Speaker	A-D
53	Silvery metal	Bolt, speaker	A-D
54	Green coated translucent plastic / coppery metal	PCB, speaker	A-D
55	Silvery solder	PCB, speaker	A-D
56	Black plastic	Case, earplug, PCB	A-D
57	Silver plated golden metal	Connector, earplug, PCB	A-D
58	Grey plastic	Button, button switch, PCB	A-D
59	Silver plated golden metal	Case, button switch, PCB	A-D
60	Silver plated golden metal	Connector, button switch, PCB	A-D
61	White body	LED, PCB	A-D
62	Black body	SMD IC, PCB	A-D
63	Silvery body	Crystal, PCB	A-D
64	Brown body	SMD capacitor, PCB	A-D
65	Black / white body	SMD resistor, PCB	A-D
66	White printed green coated translucent plastic / coppery metal	PCB	A-D
67	Silvery solder	PCB	A-D
68	Silvery metal	Screw, L:8mmΦ :4mm	A-D

RESULTS:

Compliance Test - European Parliament and 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

-	**Result**						
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)	-	-	-	-	-	-	-
1	ND	ND	ND	ND	ND	ND	PASS
2	ND	ND	ND	ND	ND	ND	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	ND	ND	ND	PASS
6	ND	ND	ND	ND	ND	ND	PASS
7	ND	ND	ND	ND	ND	ND	PASS
8	ND	ND	ND	ND	ND	ND	PASS
9	ND	ND	ND	ND	ND	ND	PASS
10	ND	ND	ND	Negative[#]	NA	NA	PASS
11	ND	ND	ND	ND	ND	ND	PASS
12	ND	ND	ND	ND	ND	ND	PASS
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	ND	ND	PASS
16	ND	ND	ND	ND	ND	ND	PASS
17	ND	ND	ND	Negative[#]	NA	NA	PASS
18	ND	ND	ND	ND	ND	ND	PASS
19	ND	ND	ND	ND	ND	ND	PASS
20	ND	ND	ND	Negative[#]	NA	NA	PASS
21	ND	ND	ND	ND	ND	ND	PASS
22	ND	ND	ND	ND	NA	NA	PASS
23	ND	ND	ND	ND	NA	NA	PASS
24	ND	ND	ND	Negative[#]	NA	NA	PASS
25	ND	ND	ND	ND	ND	ND	PASS
26	ND	ND	ND	ND	NA	NA	PASS
27	ND	ND	ND	ND	NA	NA	PASS
28	ND	ND	ND	ND	ND	ND	PASS
29	ND	ND	ND	ND	NA	NA	PASS
30	ND	ND	ND	ND	NA	NA	PASS
31	ND	ND	ND	ND	ND	ND	PASS
32	ND	ND	ND	ND	ND	ND	PASS

RESULTS:

Compliance Test - European Parliament and 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

-	**Result**						
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)	-	-	-	-	-	-	-
33	ND	ND	ND	ND	ND	ND	PASS
34	ND	ND	ND	ND	ND	ND	PASS
35	ND	ND	ND	ND	ND	ND	PASS
36	ND	ND	ND	ND	ND	ND	PASS
37	ND	ND	ND	ND	ND	ND	PASS
38	ND	ND	ND	ND	ND	ND	PASS
39	ND	ND	ND	ND	NA	NA	PASS
40	ND	ND	ND	ND	ND	ND	PASS
41	ND	ND	ND	ND	NA	NA	PASS
42	ND	ND	ND	ND	NA	NA	PASS
43	ND	ND	ND	ND	ND	ND	PASS
44	ND	ND	ND	ND	ND	ND	PASS
45	ND	ND	ND	ND	NA	NA	PASS
46	ND	ND	ND	ND	ND	ND	PASS
47	ND	ND	ND	ND	NA	NA	PASS
48	ND	ND	ND	ND	ND	ND	PASS
49	ND	ND	ND	ND	NA	NA	PASS
50	ND	ND	ND	ND	ND	ND	PASS
51	ND	ND	ND	Negative[#]	NA	NA	PASS
52	ND	ND	ND	ND	NA	NA	PASS
53	ND	ND	ND	Negative[#]	NA	NA	PASS
54	ND	ND	ND	ND	ND[#]	ND[#]	PASS
55	ND	ND	ND	ND	NA	NA	PASS
56	ND	ND	ND	ND	ND	ND	PASS
57	ND	ND	ND	ND	NA	NA	PASS
58	ND	ND	ND	ND	ND	ND	PASS
59	ND	ND	ND	ND	NA	NA	PASS
60	ND	ND	ND	Negative[#]	NA	NA	PASS
61	ND	ND	ND	ND	ND	ND	PASS
62	ND	ND	ND	ND	ND	ND	PASS
63	ND	ND	ND	ND	NA	NA	PASS
64	ND	ND	ND	ND	ND	ND	PASS
65	ND	ND	ND	ND	ND	ND	PASS

RESULTS:

Compliance Test - European Parliament and 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

-	**Result**						
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)	-	-	-	-	-	-	-
66	ND	ND	ND	ND	ND[#]	ND[#]	PASS
67	ND	ND	ND	ND	NA	NA	PASS
68	ND	ND	ND	ND	NA	NA	PASS

Note / Key :

ND = Not detected
NR = Not requested
% = percent
Detection Limit : See Appendix.
">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10 000 mg/kg = 1 %

Remark :

- The testing approach is listed in table of Appendix.
- [#] denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Parliament and 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.

TEST RESULT

Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method **:** With reference to draft International Standard IEC 62321-8.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
1	Black soft plastic / deep blue fabric	Headphone	A-D
2	Grey printed black plastic	Headphone	A-D
3	White foam	Inner headphone	A-D
4	Red / black printed white plastic	Case, headphone	A-D
5	White soft plastic / glue	Headphone	A
6	Light white soft plastic	Headphone	B
7	White soft plastic	Glue	B
8	Transparent plastic	Washer, headphone	B
9	Brown wood	Headphone	C
11	Translucent soft plastic	Adhesive tape	A-D
12	Black plastic	Headphone	A-D
13	Light blue printed transparent plastic / glue	Sticker	A-D
14	Grey foam / glue	Inner headphone	A-D
15	Black soft plastic	Inner case, headphone	A-D
16	Deep grey foam	Inner case, headphone	A-D
18	White soft plastic	USB	A-D
19	White soft plastic	Sleeve, wire jacket	A-D
21	White plastic	Inner USB	A-D
25	Black plastic	Inner small case, USB	A-D
28	Bright white soft plastic	Case, line	A-D
31	Red soft plastic	Thin wire jacket	A-D
32	White soft plastic	Thin wire jacket	A-D
33	Black soft plastic	Thin wire jacket	A-D
34	Red soft plastic	Thick wire jacket	A-D
35	White soft plastic	Thick wire jacket	A-D
36	Black soft plastic	Thick wire jacket	A-D
37	Black soft plastic	Wire jacket	A-D
38	Red soft plastic	Wire jacket	A-D
40	Black soft plastic	Sleeve, case, MIC	A-D
43	White plastic	Washer, MIC	A-D
44	Translucent blue soft plastic	Washer, MIC	A-D
48	Transparent plastic	Diaphragm, speaker	A-D
50	Black plastic / glue	Case, speaker	A-D
56	Black plastic	Case, earplug, PCB	A-D

TEST RESULT

Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method **:** With reference to draft International Standard IEC 62321-8.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
58	Grey plastic	Button, button switch, PCB	A-D
61	White body	LED, PCB	A-D

Maximum Allowable Limit:	DEHP, BBP, DBP & DIBP: 0.1% (Each)

Tested Item(s)	Result			Conclusion
	Detected Analyte(s)	Conc.	Unit	
1+2+3	ND	ND	%	PASS
4+5+6	ND	ND	%	PASS
7+8+9	ND	ND	%	PASS
11+12+13	ND	ND	%	PASS
14+15+16	ND	ND	%	PASS
18+19+21	ND	ND	%	PASS
25+28+31	ND	ND	%	PASS
32+33+34	ND	ND	%	PASS
35+36+37	ND	ND	%	PASS
38+40+43	ND	ND	%	PASS
44+48+50	ND	ND	%	PASS
56+58+61	ND	ND	%	PASS

Note / Key :

ND = Not detected
NR = Not requested
% = percent
Detection Limit (%) : 0.005

"**>**" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10 000 mg/kg = 1 %

Remark : The list of phthalates is summarized in table of Appendix.

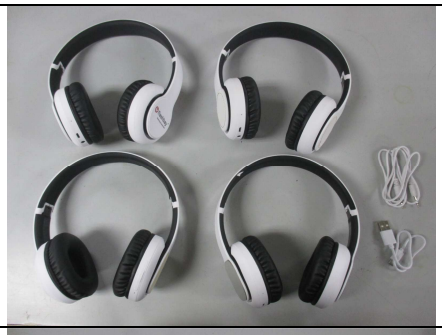
Comment :

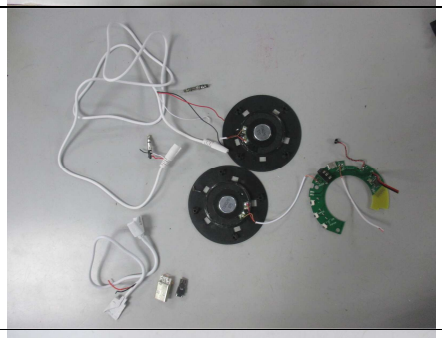
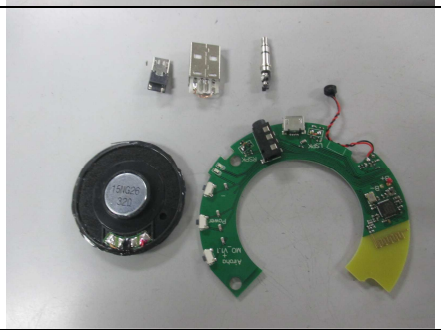
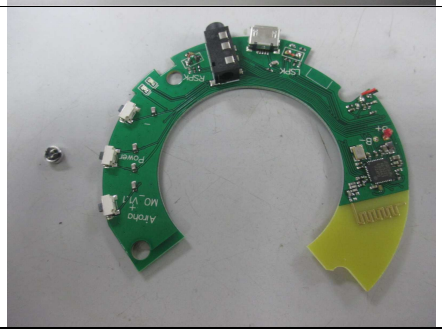
TEST RESULT

Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Photograph(s) [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

Photograph of Test Item(s)



/

END

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and 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]	1 000
2	Cadmium (Cd)	50	50	50	10[b]	100
3	Mercury (Hg)	100	200	200	10[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3[g, h] / 10[d] / See [e, j]	1 000 / Negative[j]
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 1 000
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 1 000

	NA = Not applicable
[a]	Test method with reference to International Standard IEC 62321-3-1: 2013.
[b]	Test method with reference to International Standard IEC 62321-5: 2013.
[c]	Test method with reference to International Standard IEC 62321-4: 2017.
[d]	Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.
[e]	Metal - Test method with reference to International Standard IEC 62321-7-1: 2015 [i].
[f]	Test method with reference to International Standard IEC 62321-6: 2015.
[g]	Leather - Test method International Standard ISO 17075: 2007.
[h]	Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.
[i]	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.
[j]	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 Parliament and 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 Parliament and Council Directive 2011/65/EU, Article 4(1).

Testing Approach [Compliance Test for European Parliament and 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)

List of Phthalates:

No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	3	Dibutyl phthalate (DBP)	84-74-2
2	Butyl benzyl phthalate (BBP)	85-68-7	4	Diisobutyl phthalate (DIBP)	84-69-5

RESULTS:


Sample Number:
85173270002A1
Sample Number:
85173270002B1
Sample Number:
85173270002C1
Sample Number:
85173270002D1