

TEST REPORT

Applicant: Shenzhen shangsuzhiguang Technology Co., Ltd
Address: 304 Jinshan Industrial Park, 178 Songming Avenue, Songgang street, Bao'an District, Shenzhen

The following sample(s) was/were submitted and identified on behalf of the client as:

Product name: COB soft light band
Model: 384 light bar
Serial Model: 320 light bar, 336 light bar, 480 light bar, 528 light bar, Two-color light, RGB light bar
Manufacturer: Shenzhen shangsuzhiguang Technology Co., Ltd
Address: 304 Jinshan Industrial Park, 178 Songming Avenue, Songgang street, Bao'an District, Shenzhen
Sample Received Date: May. 11, 2021
Testing Period: May. 11, 2021~ May. 17, 2021

Test Requirement:

As specified by client, to determine the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated, Diphenyl Ethers(PBDEs), Bis-(2-ethylhexyl) Phthalate (DEHP), Benzyl butyl Phthalate (BBP), Dibutyl Phthalate (DBP) and Diisobutyl Phthalate(DIBP) contents in the submitted sample in accordance with RoHS directive 2011/65/EU and the amendment directive (EU) 2015/863.

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

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

Compiled by: _____

Bi Yun

Reviewed by: _____

Glenn

Approved by: _____

Mark Liao

Date: _____

2021-05-25

Test Result(s):

Part No.	Part Description	Test Items	XRF Screening Result(mg/kg)	Chemical Test Result(mg/kg)	Conclusion
1	White FPC	Pb	BL	/	Pass
		Cd	IN	N.D	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	

Note: 1.N.D. = Not Detected (<MDL) MDL = Method Detection Limit
 mg/kg = ppm =0.0001% / =Not Regulated or Not Applicable

2. BL = Under the XRF screening limit

IN = Further chemical test will be conducted when the screening result inconclusive

OL = Further chemical test will be conducted while the result is above the screening limit.

Remark: 1. The screening results are only used for reference.

2. 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.

3. As specified by client, only test the designated sample.

Test Method:

when screening results exceed the XRF screening limit in IEC62321-3-1: 2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs) and Polybrominated Diphenyl Ethers(PBDEs)

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

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

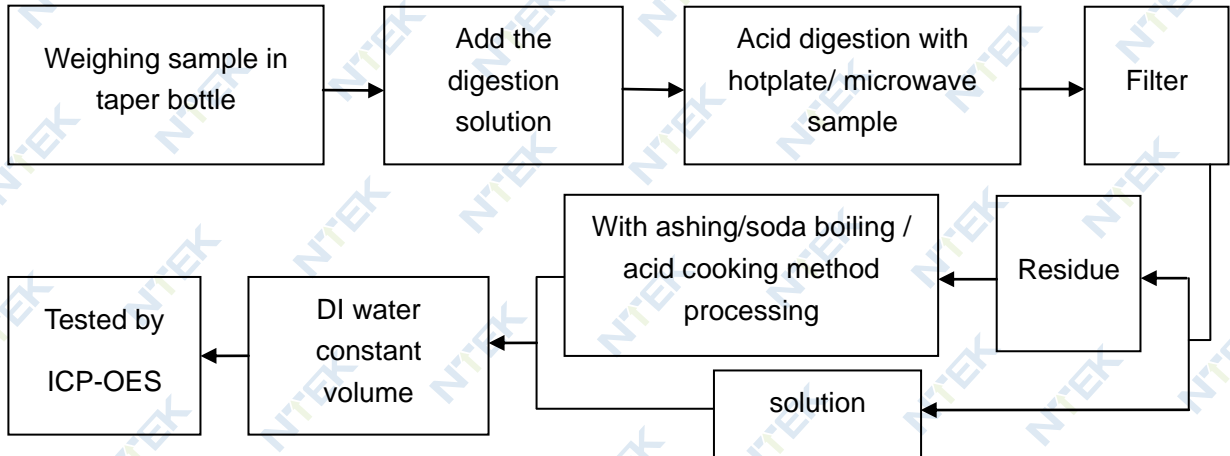
Note: BL=Under the XRF screening limit OL=Over the XRF screening limit
 X=The symbol "X" marks the region where further investigation is necessary.
 3σ =The reproducibility of analytical instruments LOD= Detection limit

2. Chemical Test

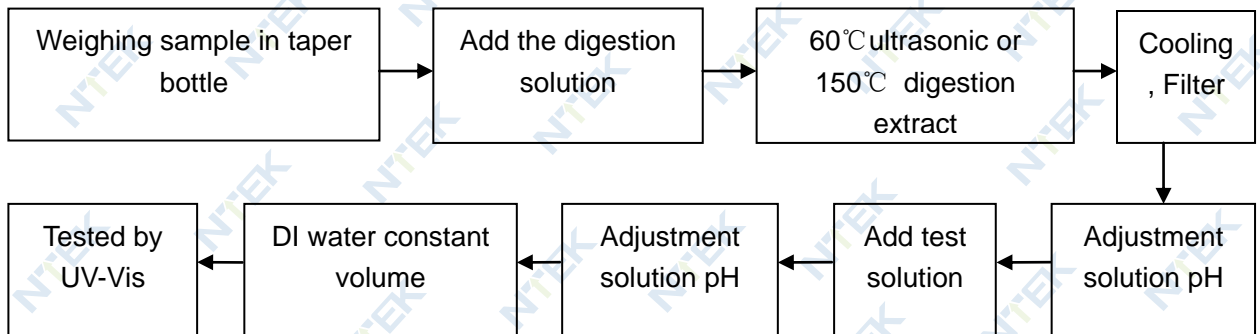
Test item	Test method	Test instrument	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	10 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	10 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	10 mg/kg	1000 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321-7-2:2017 Ed.1.0	UV-Vis	10 mg/kg	1000 mg/kg
Polybrominated Biphenyls(PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS	100 mg/kg	1000 mg/kg
Polybrominated, Diphenyl Ethers(PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS	100 mg/kg	1000 mg/kg
Bis-(2-ethylhexyl) Phthalate (DEHP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Benzyl butyl Phthalate (BBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Dibutyl Phthalate (DBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Diisobutyl Phthalate(DIBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg

Test Flow:

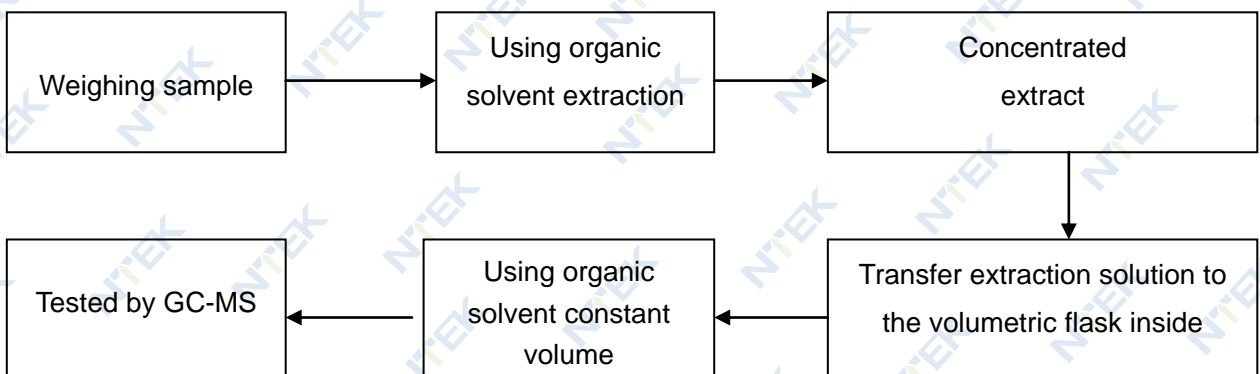
1. Lead(Pb), Cadmium(Cd) , Mercury (Hg)



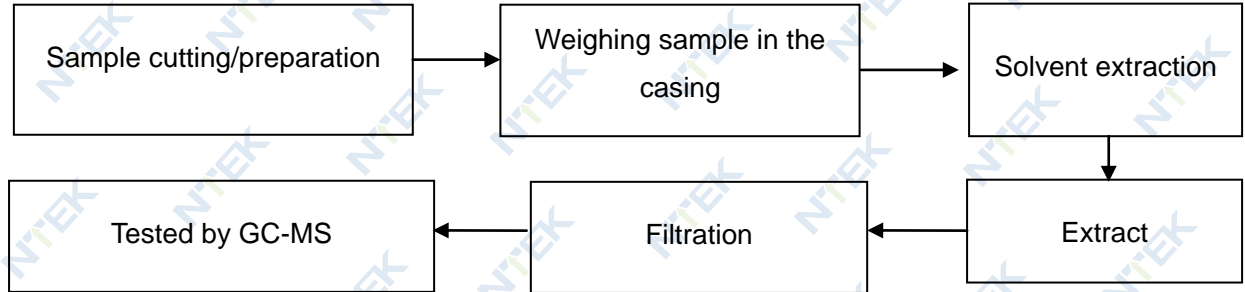
2. Hexavalent Chromium(Cr(VI))



3. PBBs/ PBDEs



4. Phthalates



Sample photo(s):



Fig.1

****End of Report****

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