

RoHS TEST REPORT

SAMPLE INFORMATION:

1. Sample Description: Head Up Display
2. Trade Mark: N/A
3. Model, Specification, Grade: P12
4. Manufacturer: Shenzhen Wins Novelty Co.,Ltd.
5. Manufacturer Address: 2F,Building 30,Chen Tian industrial park,bao min second road,xi xiang,Bao an district,Shen zhen,China
6. Applicant: Shenzhen Wins Novelty Co.,Ltd.
7. Applicant Address: 2F,Building 30,Chen Tian industrial park,bao min second road,xi xiang,Bao an district,Shen zhen,China
8. Test Standards:
 1. As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.
 2. As specified by client, when screening results exceed the XRF screening limit in IEC 62321-3-1: 2013, further use of wet chemical methods are required to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted sample(s).

REMARKS:

1. The test data obtained and the report issued by laboratories other than TMC are provided by the applicant to us for data consolidation purposes. The report shall not be reproduced in part without written approval of us.
2. Characterization & Condition of sample: Normal.
3. Ambient Condition during Testing: (15-22) °C (20-40) % RH
4. Date of Issued: April 27, 2018

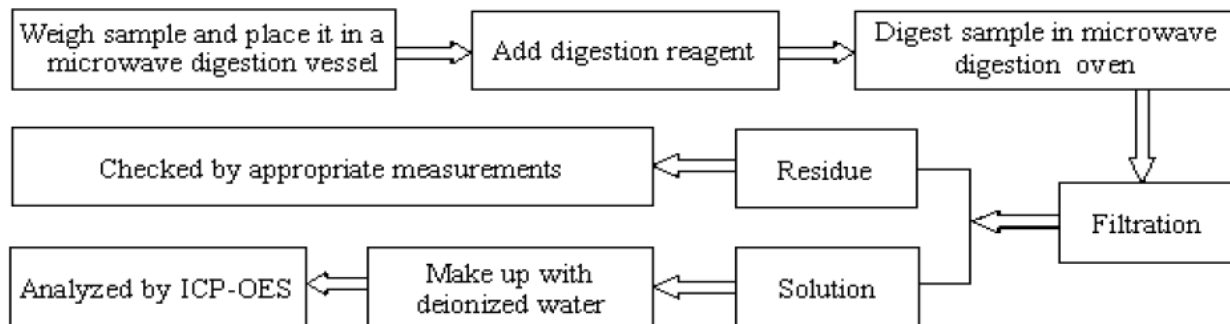
Approved by: _____

Certification Manager

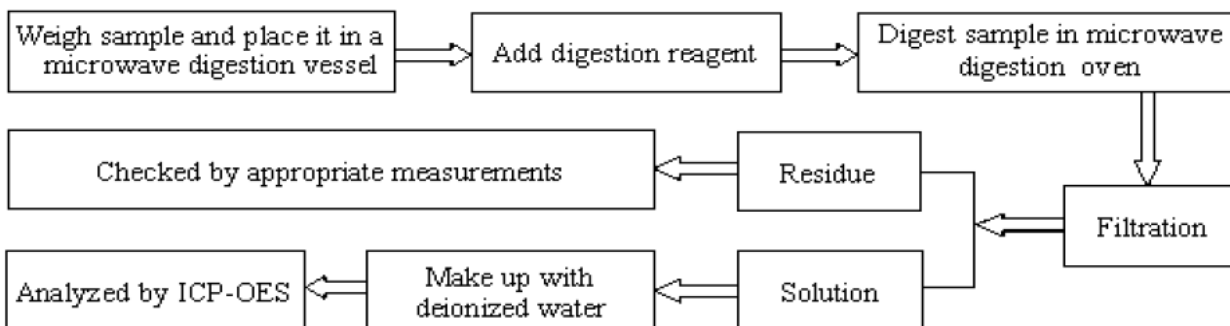
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Test process

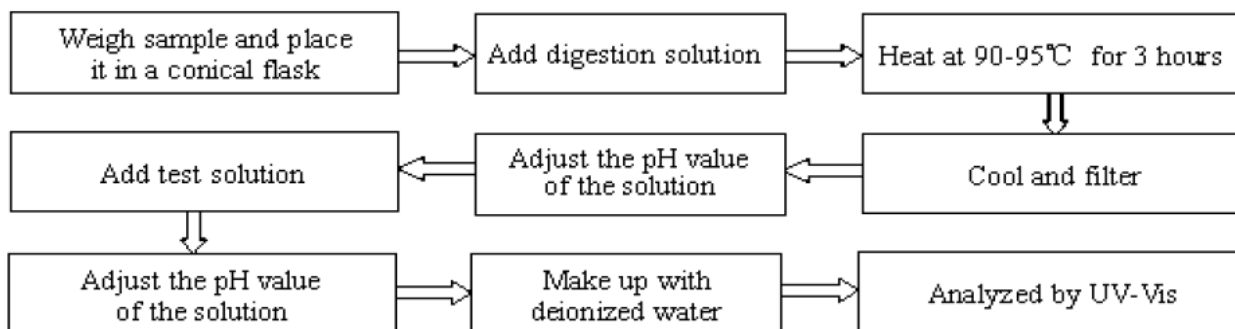
1. Lead(Pb), Cadmium(Cd)



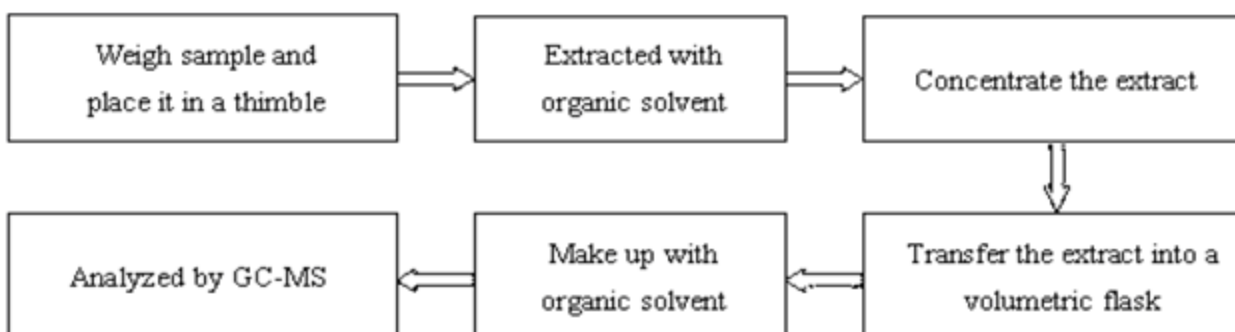
2. Mercury(Hg)



3. Hexavalent Chromium (Cr(VI))



4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers(PBDEs), DIBP, DBP, DEHP, BBP



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SAMP LE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
1	Cable	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
2	Shell	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
3	Screw	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
4	PCBA	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P

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5	Solder	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
6	LED	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
7	Switch	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
8	Screen	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P

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SAMP LE NO.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
9	USB interface	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
10	soft ciucuit	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P
11	Blue sticker	Cd	P	N.D.	<100	P
		Cr	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
		Pb	P	N.D.	<1000	P
		PBBs	D	N.D.	<1000	P
		PBDEs	D	N.D.	<1000	P
		HBCDD	D	N.D.	<1000	P
		DEHP	D	N.D.	<1000	P
		DBP	D	N.D.	<1000	P
		BBP	D	N.D.	<1000	P

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Remark:

(1) It is the result on total Br while test PBBs and PBDEs by EDXRF. It is the result on total Cr while test Hexavalent Chromium by EDXRF.

(2) Results are obtained by EDXRF for primary screening, and chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (Cr(VI)) and GCMS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321:2013 (unit:mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	$P \leq 70 - 3\sigma < D < 130 + 3\sigma \leq F$	$P \leq 70 - 3\sigma < D < 130 + 3\sigma \leq F$	$P \leq 50 - 3\sigma < D < 150 + 3\sigma \leq F$
Pb	$P \leq 700 - 3\sigma < D < 1300 + 3\sigma \leq F$	$P \leq 700 - 3\sigma < D < 1300 + 3\sigma \leq F$	$P \leq 500 - 3\sigma < D < 1500 + 3\sigma \leq F$
Hg	$P \leq 700 - 3\sigma < D < 1300 + 3\sigma \leq F$	$P \leq 700 - 3\sigma < D < 1300 + 3\sigma \leq F$	$P \leq 500 - 3\sigma < D < 1500 + 3\sigma \leq F$
Br	$P \leq 300 - 3\sigma < D$	-----	$P \leq 250 - 3\sigma < D$
Cr	$P \leq 700 - 3\sigma < D$	$P \leq 700 - 3\sigma < D$	$P \leq 500 - 3\sigma < D$

P = PASS; F = FAIL; D = DETECTED;

(3) mg/kg = ppm; N.D. = NOT DETECTED (<MDL) Pb, Cd, Hg: 10 mg/kg; Cr(VI): 2mg/kg; PBBs, PBDEs: 5mg/kg

(4) According to IEC 62321:2013, result on Cr(VI) for metal sample is shown as Positive/Negative.

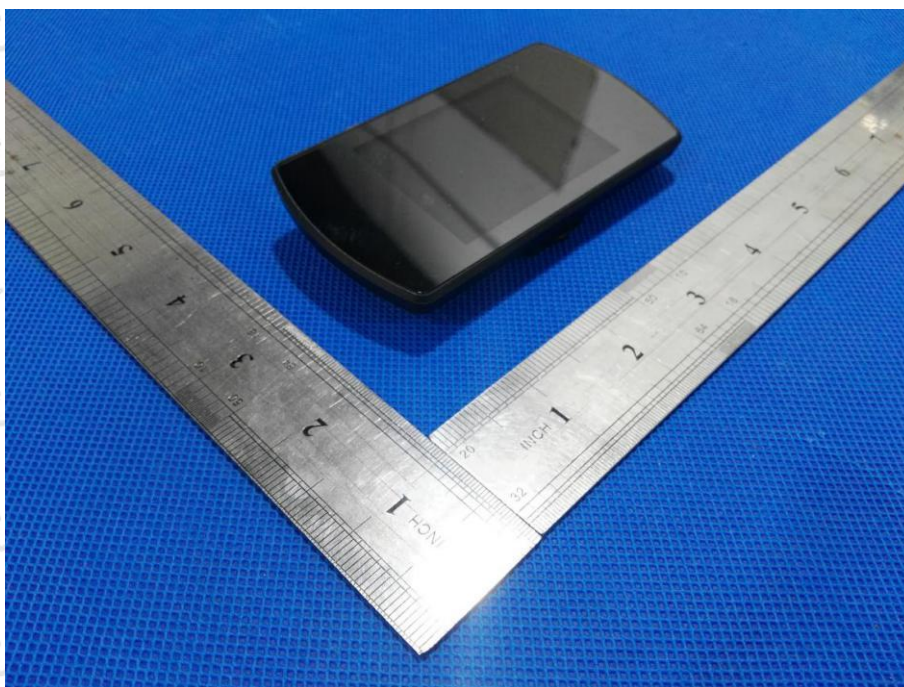
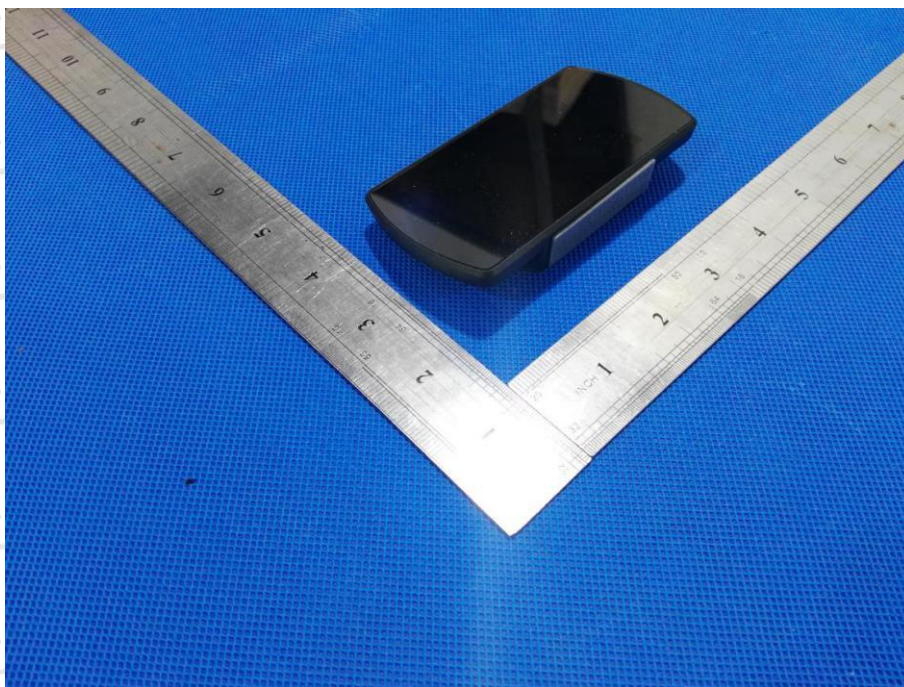
Positive = Presence of Cr(VI) coating, Negative = Absence of Cr(VI) coating

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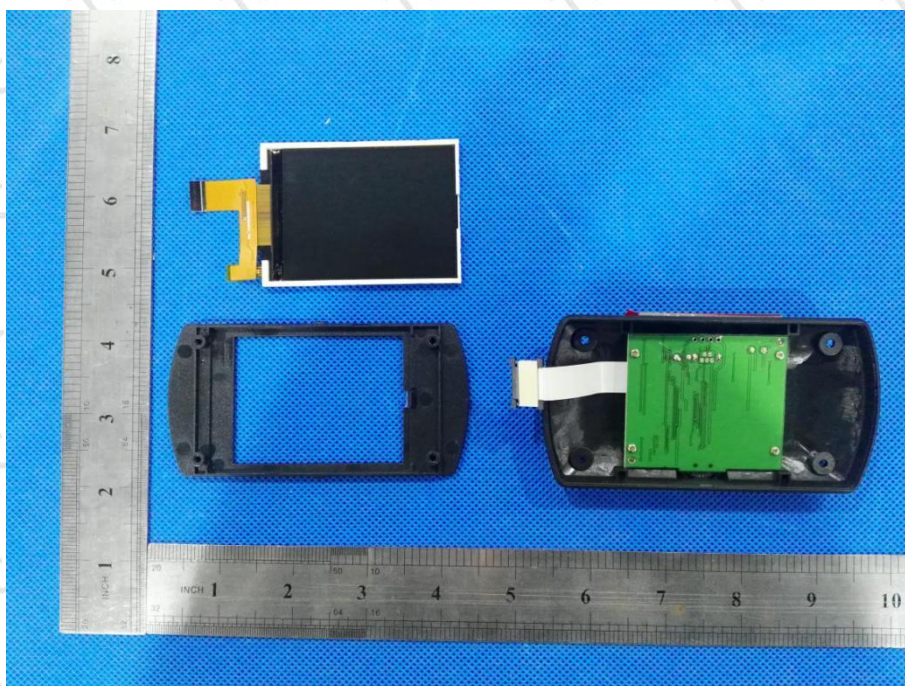
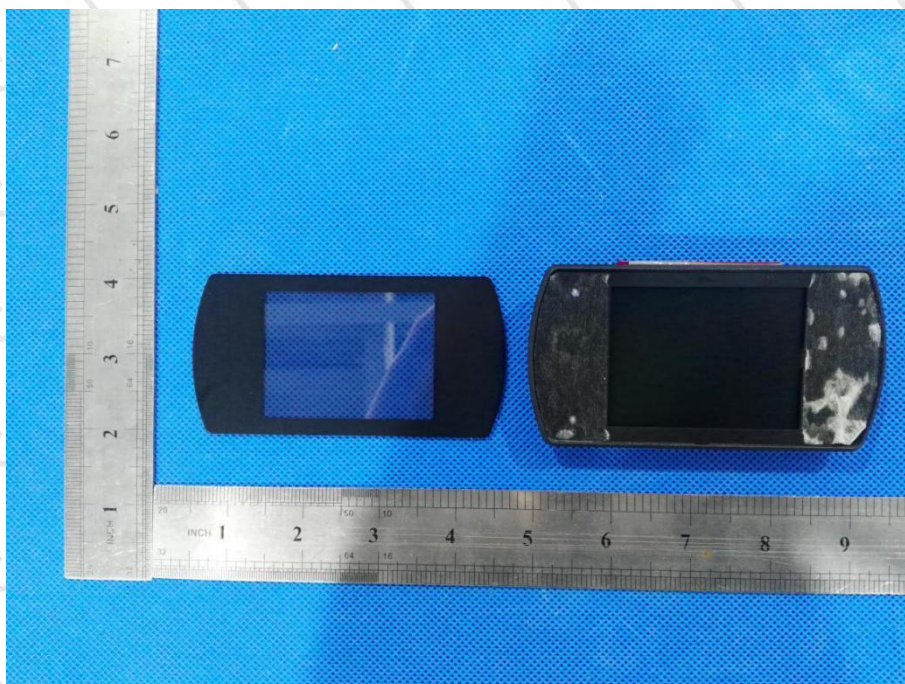
Sample photo:



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TMC authenticate the photo on original report only

*** End of Report ***