TEST REPORT

Applicant:	Shenzhen Leadtek Optoelectronics CO., Ltd
Address:	3rd Floor, Building 4, Zhipeng Industrial Park, Fuyuan 1st Road, Heping Village, Bao'an District, Shenzhen China

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The following is the information provided by the client regarding the commissioned test samples, provided and confirmed by the client. Dinghua does not assume any responsibility for verifying the accuracy, appropriateness, and/or completeness of the information provided.

Manufacturer:	Shenzhen Leadtek Optoelectronics CO., Ltd
Address:	3rd Floor, Building 4, Zhipeng Industrial Park, Fuyuan 1st Road, Heping Village, Bao'an District, Shenzhen China
Production plant:	Shenzhen Leadtek Optoelectronics CO., Ltd
Address:	3rd Floor, Building 4, Zhipeng Industrial Park, Fuyuan 1st Road, Heping Village, Bao'an District, Shenzhen China
Client Contact Number:	/
Sample name:	Touch display module
Sample Condition:	Intact
Trademark:	/
Main Test Model:	LTK070WSNCT10
Series model:	See Attached Page
Sample Receiving Date:	May. 07, 2024
Testing Period:	May. 07, 2024 ~ May. 09, 2024

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	Test Requested:	Conclusion:
1.	RoHS Directive 2011/65/EU and its subsequent amendments Directive (EU) 2015/863.	Pass
	Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls(PBB), Polybrominated diphenyl ethers (PBDE) Content Screening by X-ray fluorescence spectrometry and analysis by wet chemical	Pass
	Phthalate Content	Pass
Note: The judgment rule complies with the simple binary judgment rule		

********** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE (S) **********

Ding Hua International Certification(Shenzhen) Co.,Ltd.

Signature of Authorized Representative

WJ

Authorized signatory

1.Tested components

No.	Sample Description	REMARK
1	Black double-sided tape	SEE THE PHOTO
2	Transparent glass panel with black coating	SEE THE PHOTO
3	Transparent brown adhesive tape	SEE THE PHOTO
4	Silver metal sheet	SEE THE PHOTO
5	Black IC	SEE THE PHOTO
6	Brown FPC	SEE THE PHOTO
7	Black printed white stickers	SEE THE PHOTO
8	Silver metal rear shell	SEE THE PHOTO
9	White LED	SEE THE PHOTO
10	White PCB	SEE THE PHOTO
11	White plastic frame	SEE THE PHOTO
12	Transparent plastic board	SEE THE PHOTO
13	Semi transparent silver plastic sheet	SEE THE PHOTO
14	Silver plastic sheet	SEE THE PHOTO
15	Semi transparent white plastic sheet	SEE THE PHOTO
16	White plastic sheet	SEE THE PHOTO
17	Black adhesive tape	SEE THE PHOTO
18	Black dry glue	SEE THE PHOTO
19	Translucent black plastic sheet with adhesive	SEE THE PHOTO
20	Translucent black glass panel	SEE THE PHOTO
21	Black inductor	SEE THE PHOTO
22	Brown FPC	SEE THE PHOTO
23	Silver metal solder	SEE THE PHOTO

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2.Tested results

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
1	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
2	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
3	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
4	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	IN	---	Negative	
	PBBs	---	---	---	
	PBDEs	---	---	---	
	DBP	---	---	---	
	BBP	---	---	---	
	DEHP	---	---	---	
	DIBP	---	---	---	
5	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
6	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
7	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
8	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	---	---	---	
	PBDEs	---	---	---	
	DBP	---	---	---	
	BBP	---	---	---	
	DEHP	---	---	---	
	DIBP	---	---	---	
9	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
10	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
11	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
12	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
13	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
14	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
15	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
16	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
17	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
18	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
19	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
20	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
21	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	

Part No	Test Item	Results of EDXRF	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion
22	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	BL	---	---	
	PBDEs	BL	---	---	
	DBP	---	BL	---	
	BBP	---	BL	---	
	DEHP	---	BL	---	
	DIBP	---	BL	---	
23	Cd	BL	---	---	PASS
	Pb	BL	---	---	
	Hg	BL	---	---	
	Cr(VI)	BL	---	---	
	PBBs	---	---	---	
	PBDEs	---	---	---	
	DBP	---	---	---	
	BBP	---	---	---	
	DEHP	---	---	---	
	DIBP	---	---	---	

Note:

BL = Below Limit
--- = No Testing Required
mg/kg = milligram per kilogram
IN = Inconclusive
Negative = Result indicates the absence of hexavalent chromium in the tested sample.

Remark:

1. （1）(a) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There is the result on total Cr while test item on restricted substances is Cr(VI).

(b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed if the concentration exceeds the below warning value according to IEC62321-3-1:2013 (unit: mg/kg).

Element	Unit	Polymer	Metal	Composite Material
Cd	mg/kg	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN< (150+3σ) ≤ OL
Pb	mg/kg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ *(500-3σ)* < IN < *(1500+3σ)* ≤ OL
Hg	mg/kg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ *(500-3σ)* < IN < *(1500+3σ)* ≤ OL
Br	mg/kg	BL ≤ (300-3σ) < IN	--	BL ≤ *(250-3σ)* < IN
Cr	mg/kg	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) <IN

BL = Below Limit
OL = Over Limit
IN = Inconclusive
LOD = Limit of Detection
mg/kg=ppm= milligram per kilogram

(c) Screening results of PHTH are for hybrid test by GC-MS, and further chemical testing by GC-MS (for DBP, BBP, DEHP and DIBP) are recommended to be performed if the concentration exceeds the below warning value (unit: mg/kg).

Compound	Polymer
DBP	BL ≤ 600< IN
BBP	BL ≤ 600< IN
DEHP	BL ≤ 600< IN
DIBP	BL ≤ 600< IN

mg/kg = milligram per kilogram
1% = 10000 mg/kg = 10000 ppm

2. Test Method

Chemical testing methods & Equipment

Testing Item	Testing Method
Lead (Pb)	IEC62321-5-2013
Cadmium (Cd)	IEC62321-5-2013
Mercury (Hg)	IEC62321-4-2017
Hexavalent chromium (Cr(VI)) for plastic	IEC62321-7-2-2017
Hexavalent chromium (Cr(VI)) for coating on metals	IEC62321-7-1-2015
PBBs	IEC62321-6-2015
PBDEs	IEC62321-6-2015
DBP	IEC62321-8-2017
BBP	IEC62321-8-2017
DEHP	IEC62321-8-2017
DIBP	IEC62321-8-2017

3. RoHS Requirement

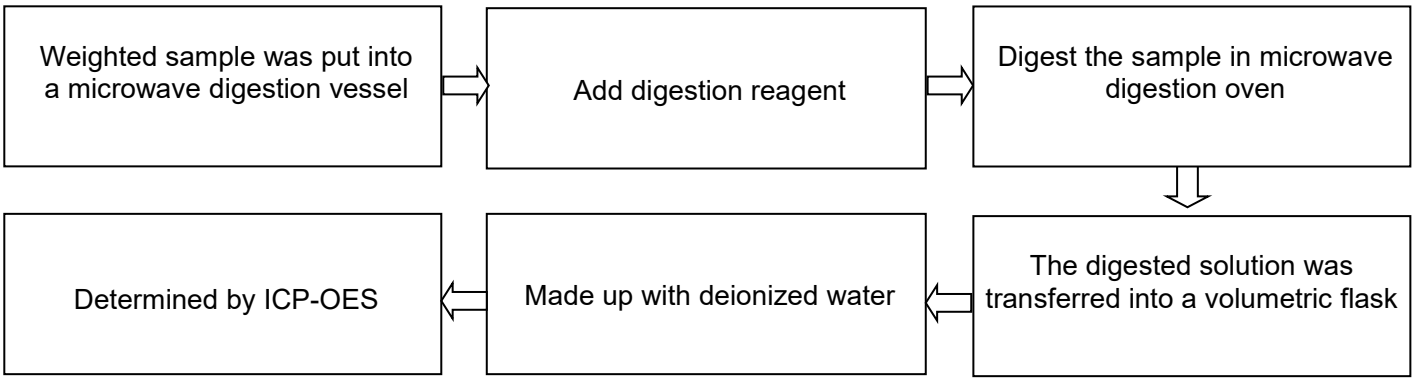
Unit:mg/kg

Restricted substances	Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	BBP	DBP	DEHP	DIBP
MDL	10	10	10	--	100	100	100	100	100	100
RoHS limit	100	1000	1000	1000	1000	1000	1000	1000	1000	1000

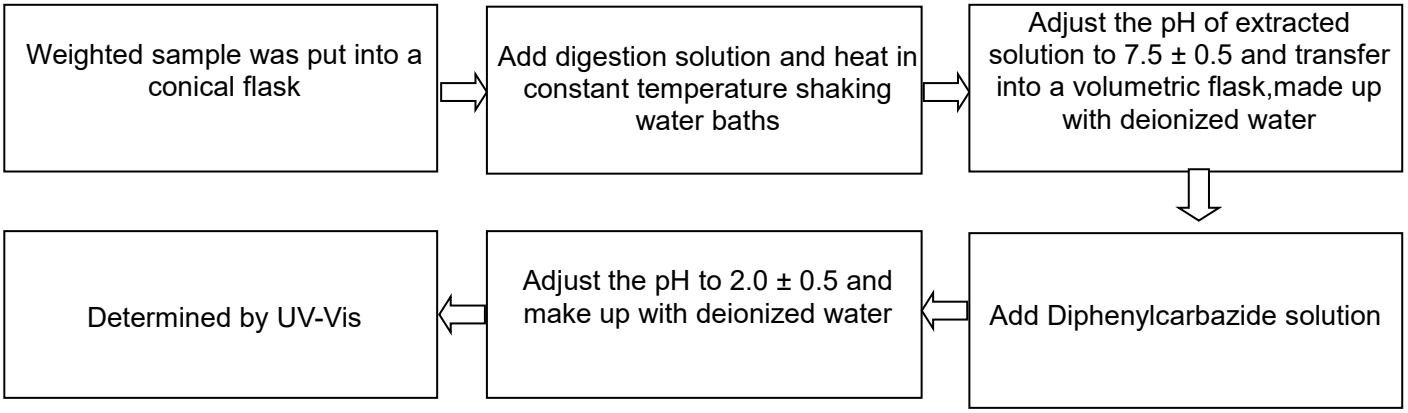
MDL of Cr(VI) for polymer, composite and leather sample is 10 mg/kg.
MDL of Cr(VI) for metal sample is 0.10μg/cm^2

4. Measurement Flowchart

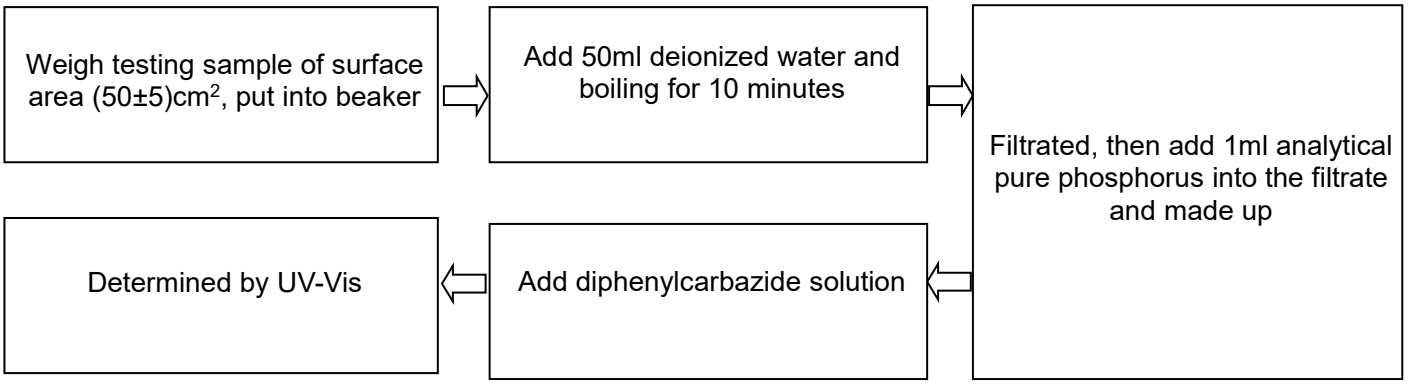
a. Test for Cd / Pb /Hg contents)



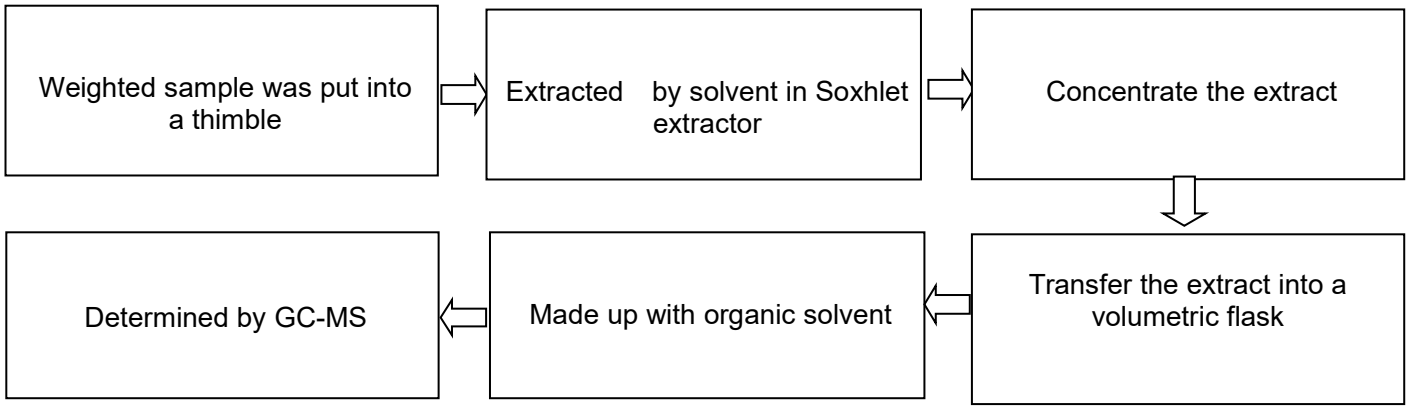
b. Test for Cr(VI) content (for non-metal)



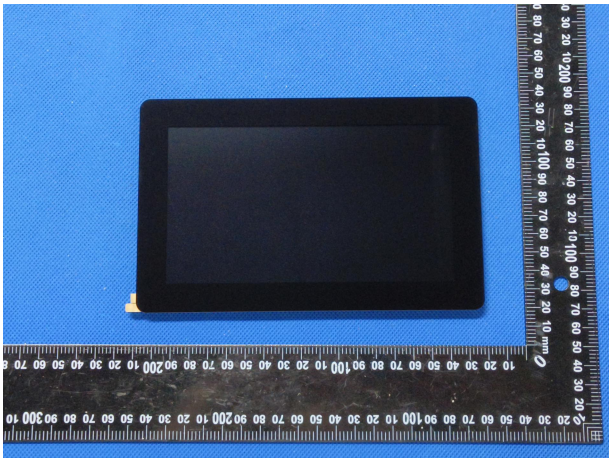
c. Test for Cr(VI) content (for metal)

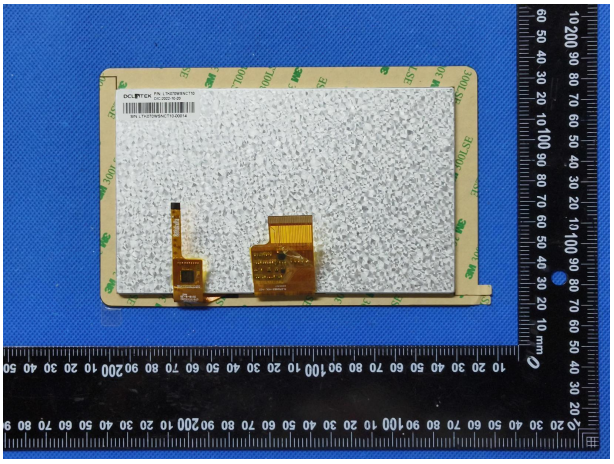


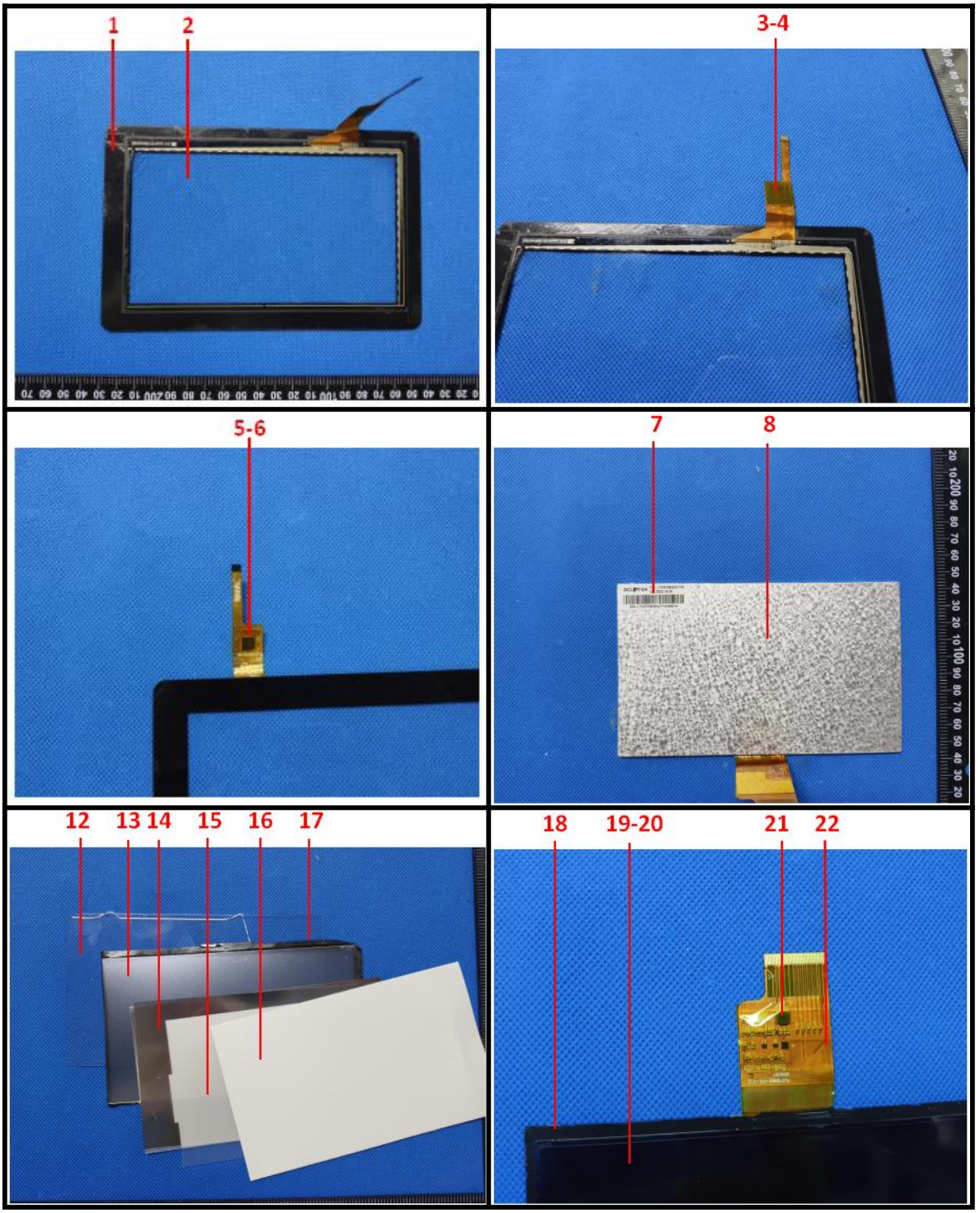
d. Test for PBBs,PBDEs,DBP,BBP,DEHP,DIBP



5.Photo(s) of the sample(s)






1
2
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13 14
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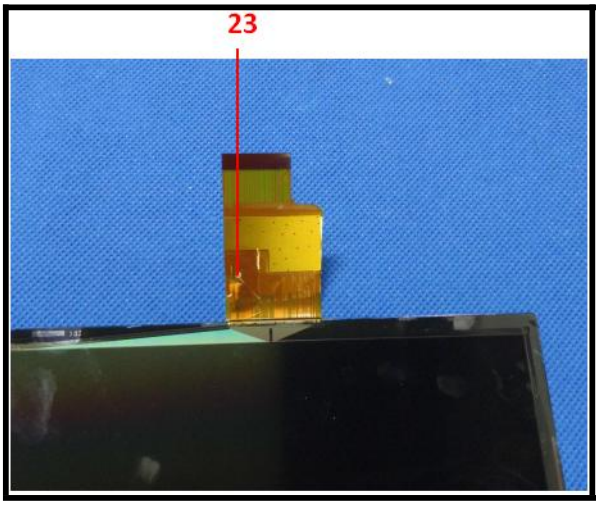
22

	——

Series model：
LTK095XXXXXX SERIES；LTK096XXXXXX SERIES；LTK013XXXXXX SERIES； LTK015XXXXXX SERIES；LTK018XXXXXX SERIES；LTK020XXXXXX SERIES； LTK021XXXXXX SERIES；LTK024XXXXXX SERIES；LTK028XXXXXX SERIES； LTK034XXXXXX SERIES；LTK346XXXXXX SERIES；LTK035XXXXXX SERIES； LTK039XXXXXX SERIES；LTK040XXXXXX SERIES；LTK043XXXXXX SERIES； LTK050XXXXXX SERIES；LTK055XXXXXX SERIES；LTK060XXXXXX SERIES； LTK062XXXXXX SERIES；LTK068XXXXXX SERIES；LTK069XXXXXX SERIES； LTK070XXXXXX SERIES；LTK078XXXXXX SERIES；LTK080XXXXXX SERIES； LTK088XXXXXX SERIES；LTK100XXXXXX SERIES；LTK101XXXXXX SERIES； LTK104XXXXXX SERIES；LTK113XXXXXX SERIES；LTK116XXXXXX SERIES； LTK121XXXXXX SERIES；LTK123XXXXXX SERIES；LTK133XXXXXX SERIES； LTK156XXXXXX SERIES；LTK185XXXXXX SERIES；LTK215XXXXXX SERIES

The results of this report apply only to samples received， Without written authorization, any copy of this report for propaganda is invalid.

.....End of Report.....