

# ROHS TEST REPORT

For

**Shenzhen Rose Lighting Technology Co., Ltd**

Product Name:	LED decorative Lighting
Brand Name:	Rose Lighting
Model Number:	RL-40mm-ICRGB, RL-9mm, RL-12mm, RL-12mm- ICRGB, RL-10mm-ICRGB, RL-17mm-ICRGB, RL-18mm-ICRGB, RL-20mm-ICRGB, RL-30mm-ICRGB, RL-45mm-ICRGB, RL-50mm-ICRGB, RL-80mm-ICRGB, RL-100mm-ICRGB, RL-120mm-ICRGB, RL-3235-ICRGB, RL-263-ICRGB, RL-356-ICRGB, RL-359-ICRGB, RL-383-ICRGB, RL-387-ICRGB, RL-3812-ICRGB, RL-456-ICRGB, RL-459-ICRGB, RL-5012-ICRGB, RL-6016-ICRGB, RL-6018-ICRGB, RL-6018B-ICRGB, RL-4512B-ICRGB, RL-3015B-ICRGB, RL-23B-ICRGB, RL-25B-ICRGB, RL-30B-ICRGB, RL-35B-ICRGB, RL-50B-ICRGB, RL-50B-ICRGB-F
Prepared For:	Shenzhen Rose Lighting Technology Co., Ltd
Address:	No.53 Yuexing Rd, Guanlan Street, Longhua District, Shenzhen, China
Prepared By:	Shenzhen Youbest Testing Technology Co., Ltd.
Address:	2/F, No. 2 of Tongqing Road, Tongxin Community, Baolong Street, Longgang District, Shenzhen, China
Report No.:	YB210225189JS-ROHS-B1

## TEST RESULT CERTIFICATION

**Applicant** : Shenzhen Rose Lighting Technology Co., Ltd  
**Address** : No.53 Yuexing Rd, Guanlan Street, Longhua District, Shenzhen, China  
**Manufacturer** : Shenzhen Rose Lighting Technology Co., Ltd  
**Address** : No.53 Yuexing Rd, Guanlan Street, Longhua District, Shenzhen, China  
**EUT** : LED decorative Lighting  
**Brand Name:** : Rose Lighting  
RL-40mm-ICRGB, RL-9mm, RL-12mm, RL-12mm- ICRGB,  
RL-10mm-ICRGB, RL-17mm-ICRGB, RL-18mm-ICRGB,  
RL-20mm-ICRGB, RL-30mm-ICRGB, RL-45mm-ICRGB,  
RL-50mm-ICRGB, RL-80mm-ICRGB, RL-100mm-ICRGB,  
**Model Number** : RL-120mm-ICRGB, RL-3235-ICRGB, RL-263-ICRGB, RL-356-ICRGB,  
RL-359-ICRGB, RL-383-ICRGB, RL-387-ICRGB, RL-3812-ICRGB,  
RL-456-ICRGB, RL-459-ICRGB, RL-5012-ICRGB, RL-6016-ICRGB,  
RL-6018-ICRGB, RL-6018B-ICRGB, RL-4512B-ICRGB, RL-3015B-ICRGB,  
RL-23B-ICRGB, RL-25B-ICRGB, RL-30B-ICRGB, RL-35B-ICRGB,  
RL-50B-ICRGB, RL-50B-ICRGB-F  
**Date of Receipt:** : February 20, 2021  
**Test Date** : February 21-25, 2021  
**Date of Report** : February 25, 2021  
**Test Standard** : IEC 62321-3-1:2013, IEC 62321-5:2013,  
IEC 62321-4:2013+A1:2017, IEC 62321-7-1:2015,  
IEC 62321-7-2:2017, IEC 62321-6:2015, IEC 62321-8:2017  
**Comment** : As specified by client, to test the Lead(Pb), Cadmium(Cd), Mercury(Hg),  
Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyl(PBBs), Polybrominated  
Diphenyl Ethers (PBDEs), Diisobutyl phthalate (DIBP), Dibutyl phthalate(DBP),  
Benzyl butyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP) in selected  
material of the submitted sample in accordance with the RoHS  
Directive 2011/65/EU and amendment Commission Delegated Directive  
(EU) 2015/863 with effective from 22 July 2019.

Prepared by(Engineer): Nina Deng

Reviewer(Supervisor): Jack Li

Approved(Manager): Eric Sang



*This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen Youbest Testing Technology Co., Ltd.*

# Test Report

## 1、 Test Method:

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

(1) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than RL).

② Unit and RL (Report limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL	2	2	2	2	5	5

③ According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative. Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

④ According to IEC 62321-3-1:2013, this column represents the results of wet chem test.

(2) This column represents the exempted decoration of material or other related testing sample's information.

## 2、 Test Sample Split

Material No.	Description
No.1	Transparent plastic shell
No.2	Yellow sealant
No.3	Transparent plastic wire sleeve
No.4	Red plastic wire sleeve
No.5	PCB
No.6	Silver metal wire
No.7	LED

Note: 1. This table is used to identify each test part of the Sample. Different descriptions in the "Description" column are only used to distinguish each test part. "Material" column are only gives a simple Description of the material of each test part, which does not mean that this is the result of a material identification.

2. The sample test parts and / or material is specified by the customer.

### 3、 Test Results:

#### Material No. 1

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

#### Material No. 2

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

#### Material No. 3

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

**Material No. 4**

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

**Material No. 5**

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

**Material No.6**

Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	/	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	/	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	/	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	/	Pass

**Material No. 7**

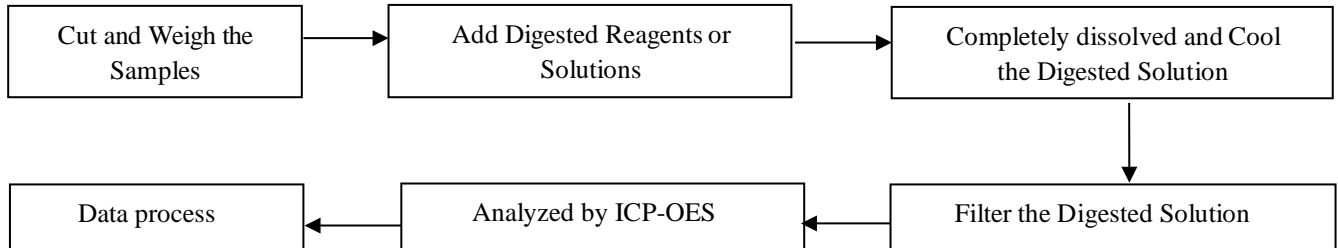
Test item	Unit	XRF Screening Test	Chemical Test	Conclusion
Lead(Pb)	mg/kg	BL	/	Pass
Cadmium(Cd)	mg/kg	BL	/	Pass
Mercury(Hg)	mg/kg	BL	/	Pass
Hexavalent Chromium(Cr(VI))	mg/kg	BL	/	Pass
Polybrominated Biphenyls (PBBs)	mg/kg	BL	/	Pass
Polybrominated.Diphenyl Ethers (PBDEs)	mg/kg	BL	/	Pass
Dibutyl phthalate (DBP)	mg/kg	N/A	ND	Pass
Butyl benzyl phthalate (BBP)	mg/kg	N/A	ND	Pass
Di(2-ethylhexyl) phthalate (DEHP)	mg/kg	N/A	ND	Pass
Diisobutyl phthalate (DIBP)	mg/kg	N/A	ND	Pass

**Remark:**

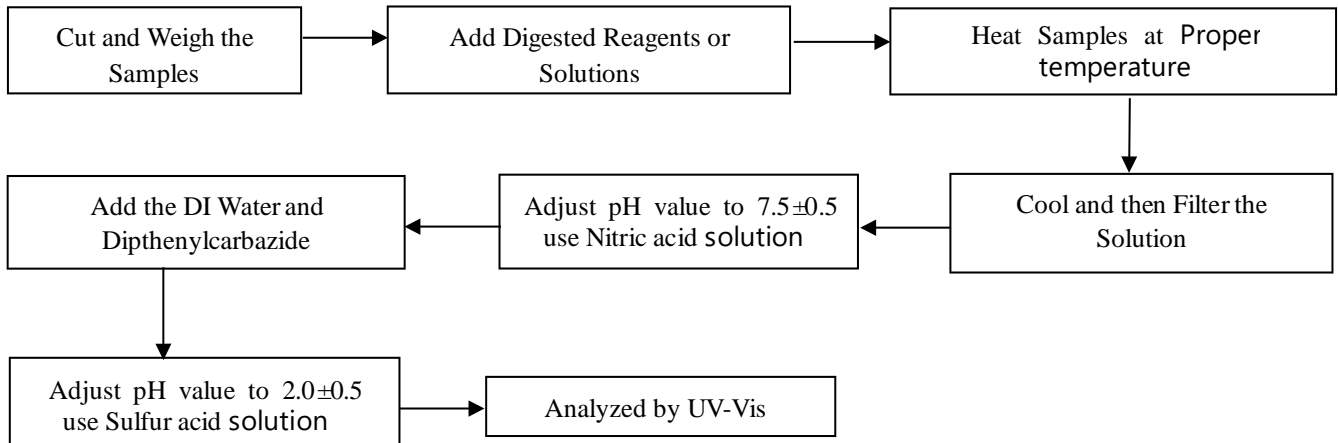
- ① Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).
- ② OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable, N.D.=not detected(less than RL), mg/kg = milligram per kilogram (ppm).
- ③ The EDXRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

## Test Process Flow

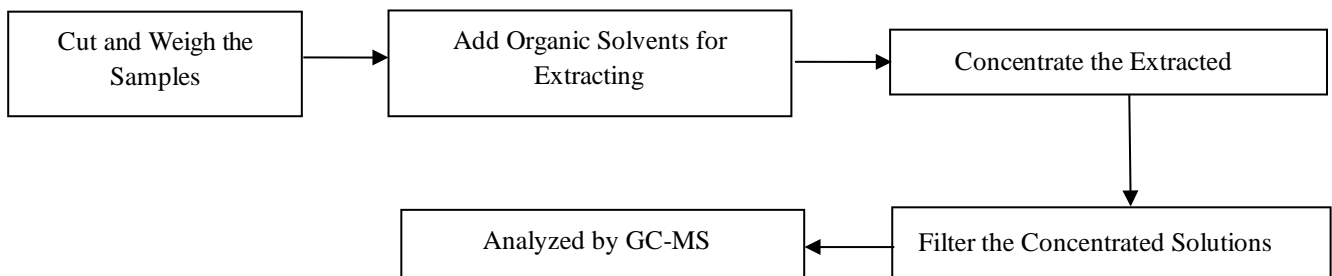
### 1. Lead, Cadmium, Mercury



### 2. Hexavalent Chromium (Non-metal)

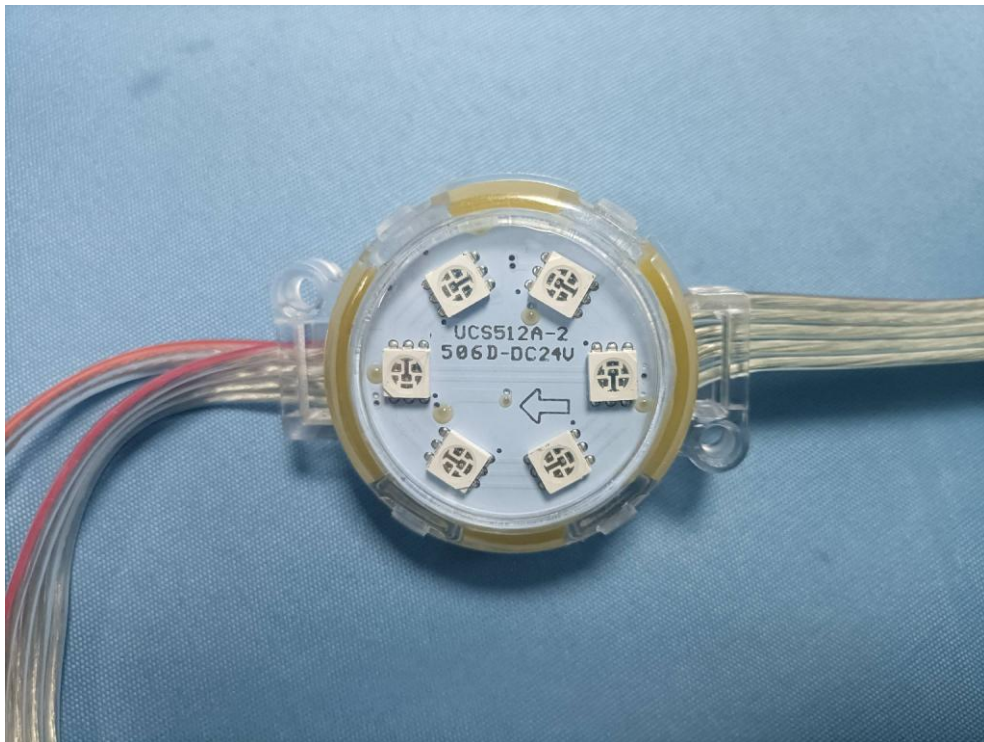
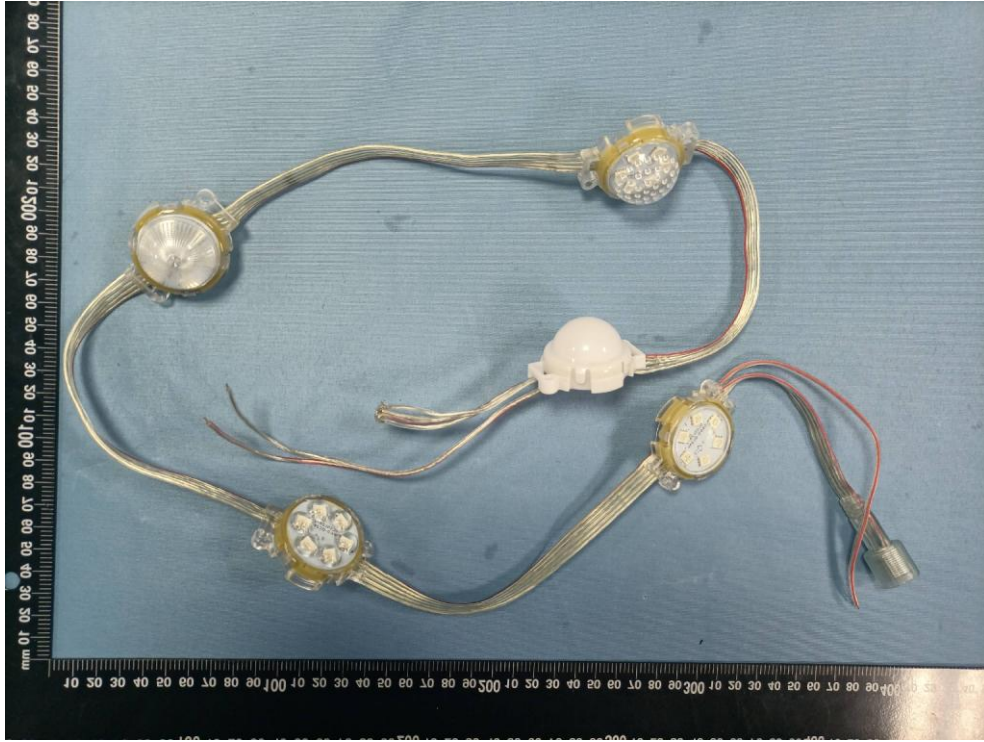


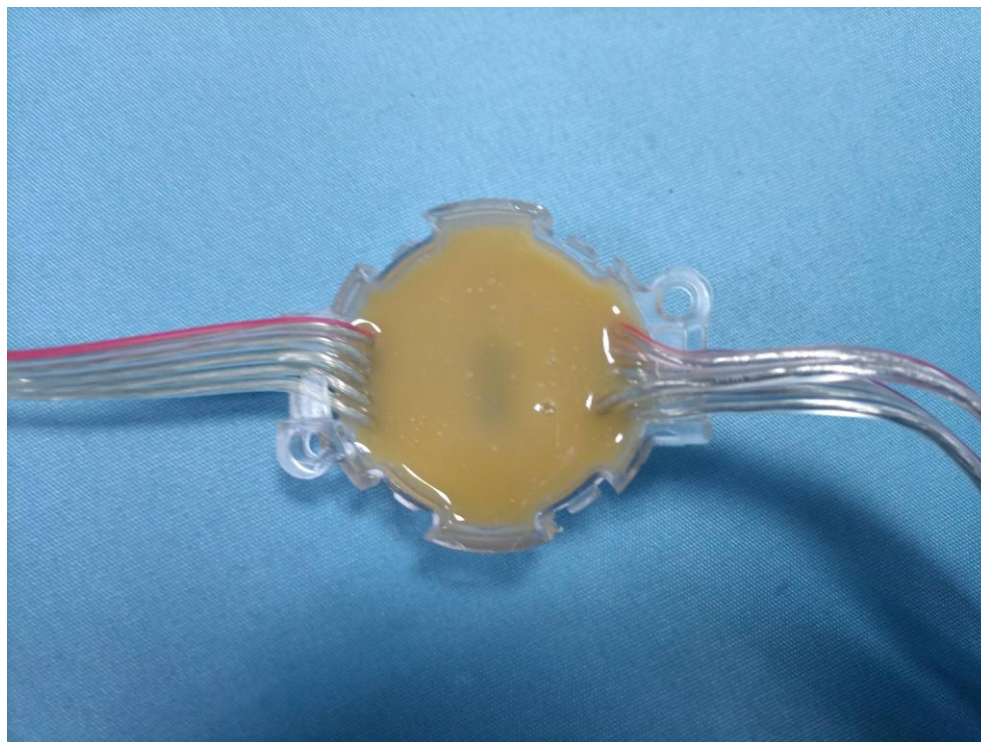
### 3. PBBs & PBDEs, Phthalates





# EUT PHOTOGRAPHS





\*\*\*\*\* END OF REPORT \*\*\*\*\*