

**Applicant** Shenzhen ying yan zhitong jishu Co., Ltd.  
**Address** No. 36, Qijiang Road, Guzhen Town, Zhongshan City, Guangdong Province  
**Manufacturer** Shenzhen ying yan zhitong jishu Co., Ltd.  
**Address** No. 36, Qijiang Road, Guzhen Town, Zhongshan City, Guangdong Province  
The following sample(s) was /were submitted and identified on behalf of the clients as :  
**Sample Name:** wall lamp  
**Model Name:** 2001, 2005, 2006, 2007, BS001, BS002, BS003, BS007, BS042, BC601, BC605, BC606, BC607, BC608, BC615  
**Trade Name:** gouwuche  
**Sample Received Date:** April 12, 2022  
**Testing Period:** May 30, 2022-June 08, 2022  
**Report Date:** June 25, 2022  
**Test Requested:** Selected test (s) in the selected parts as requested by client with the RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU on the restriction of hazardous substances.  
**Test Method** Please refer to next page(s).  
**Test Result** Please refer to next page(s).  
**Test conclusion:** Based upon the performed tests by submitted samples, the test results comply with the limits of the RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

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Vivian Jiang  
Technical Director

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## 1. Pb, Cd, Cr(VI), Hg, PBBs&amp;PBDEs

## Test Method:

## A. Disassembly, disjointment and mechanical sample preparation

–Ref. to IEC 62321-2:2013, Disassembly, disjointment and mechanical sample preparation.

B. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report.

## (1) Screening - Lead, mercury, cadmium, total chromium and total bromine

–Ref. to IEC 62321-3-1:2013, Screening for Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry.

## (2) Wet chemical test method

| Test Item(s)      | Test Method                    | Test Equipment | Unit                | MDL | Limit |
|-------------------|--------------------------------|----------------|---------------------|-----|-------|
| Pb                | IEC62321-5:2013                | ICP-OES        | mg/kg               | 2   | 1000  |
| Cd                | IEC62321-5:2013                | ICP-OES        | mg/kg               | 2   | 100   |
| Hg                | IEC 62321-4:2013<br>/AMD1:2017 | ICP-OES        | mg/kg               | 2   | 1000  |
| Cr(VI) (Metal)    | IEC62321-7-1:2015              | UV-Vis         | μ g/cm <sup>2</sup> | 0.1 | 0.13  |
| Cr(VI) (Nonmetal) | IEC62321-7-2:2017              | UV-Vis         | mg/kg               | 8   | 1000  |
| PBBs              | IEC62321-6:2015                | GC-MS          | mg/kg               | 5   | 100   |
| PBDEs             | IEC62321-6:2015                | GC-MS          | mg/kg               | 5   | 1000  |

**Test result(s):**

| No. | Sample Description | Results of XRF |    |    |    |     | Chemical confirmation results (mg/kg) | Conclusion |
|-----|--------------------|----------------|----|----|----|-----|---------------------------------------|------------|
|     |                    | Pb             | Cd | Hg | Cr | Br  |                                       |            |
| 1   | Black metal shell  | BL             | BL | BL | BL | --- | ---                                   | PASS       |
| 2   | Light cover        | BL             | BL | BL | BL | BL  | ---                                   | PASS       |
| 3   | Silver metal block | BL             | BL | BL | BL | --- | ---                                   | PASS       |
| 4   | Screw              | BL             | BL | BL | BL | --- | ---                                   | PASS       |
| 5   | Black sleeve       | BL             | BL | BL | BL | BL  | ---                                   | PASS       |
| 6   | White silicone     | BL             | BL | BL | BL | BL  | ---                                   | PASS       |
| 7   | The lamp bead      | BL             | BL | BL | BL | BL  | ---                                   | PASS       |

**Remark:**

- a. It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).
- b. The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition.
- c. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Pb, Cd, Hg), UV-VIS for Cr(VI) and GC/MSD (for PBBs/PBDEs) is recommended to be performed if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.
- Attached table 1, XRF screening limits in mg/kg for regulated elements in various matrices:

| Element | Polymer Material                                                   | Metallic Material                                                  | Composite Material                                                 |
|---------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|
| Pb      | BL $\leq$ 700-3 $\sigma$ $\leq$ X $<$<br>1300+3 $\sigma$ $\leq$ OL | BL $\leq$ 700-3 $\sigma$ $\leq$ X $<$<br>1300+3 $\sigma$ $\leq$ OL | BL $\leq$ 500-3 $\sigma$ $\leq$ X $<$<br>1500+3 $\sigma$ $\leq$ OL |
| Cd      | BL $\leq$ 70-3 $\sigma$ $\leq$ X $<$ 130+3 $\sigma$<br>$\leq$ OL   | BL $\leq$ 70-3 $\sigma$ $\leq$ X $<$ 130+3 $\sigma$<br>$\leq$ OL   | LOD $<$ X $<$ 150+3 $\sigma$ $\leq$ OL                             |
| Hg      | BL $\leq$ 700-3 $\sigma$ $\leq$ X $<$<br>1300+3 $\sigma$ $\leq$ OL | BL $\leq$ 700-3 $\sigma$ $\leq$ X $<$<br>1300+3 $\sigma$ $\leq$ OL | BL $\leq$ 500-3 $\sigma$ $\leq$ X $<$<br>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                                     |

XRF detection limits in mg/kg for regulated elements in various material

| Element | Polymer Material | Metallic Material | Composite Material |
|---------|------------------|-------------------|--------------------|
| Pb      | 10               | 50                | 50                 |
| Cd      | 10               | 50                | 50                 |
| Hg      | 10               | 50                | 50                 |
| Cr      | 10               | 50                | 50                 |
| Br      | 10               | 50                | 50                 |



**Note:**

- BL = Under the XRF screening limit
- OL = Future chemical test will be conducted while result is above the screening limit
- X = inconclusive, the region where need further chemical testing by ICP-OES (for Pb, Cd, Hg), UV-VIS (for Cr(VI)) and GC/MSD (for PBBs, PBDEs).
- 3σ=The reproducibility of analytical instruments
- LOD=Detection limit
- “---” = Not Applicable
- mg/kg=0.0001%
- N.D.=Not Detected(<MDL)
- MDL = Method Detection Limit
- Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm<sup>2</sup> sample surface area used.
- \*=According to 2011/65/EU Annex,point 6-Lead as an alloying element is steel containing up to 0.35% lead by weight, aluminum containing up to 0.4% lead by weight and as a copper alloy, containing up to 4% lead by weight can be exempted.

**2. Phthalates—DBP, BBP, DEHP & DIBP**

| Test Item(s)                      | Test Method     | Test Equipment | Unit  | MDL | Limit |
|-----------------------------------|-----------------|----------------|-------|-----|-------|
| Dibutyl Phthalate(DBP)            | IEC62321-8:2017 | GC-MS          | mg/kg | 30  | 1000  |
| Benzylbutyl Phthalate (BBP)       | IEC62321-8:2017 | GC-MS          | mg/kg | 30  | 1000  |
| Di-(2-ethylhexyl) Phthalate(DEHP) | IEC62321-8:2017 | GC-MS          | mg/kg | 30  | 1000  |
| Diisobutyl phthalate (DIBP)       | IEC62321-8:2017 | GC-MS          | mg/kg | 30  | 1000  |

## Test result(s):

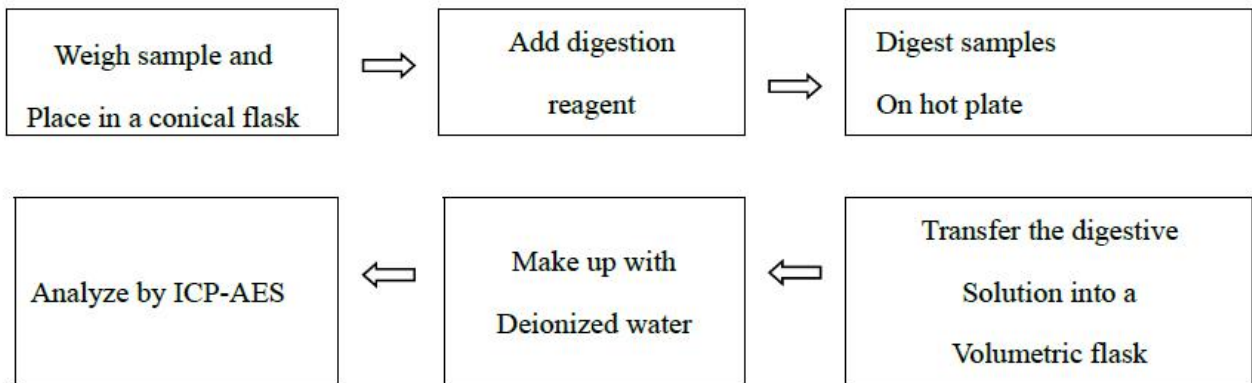
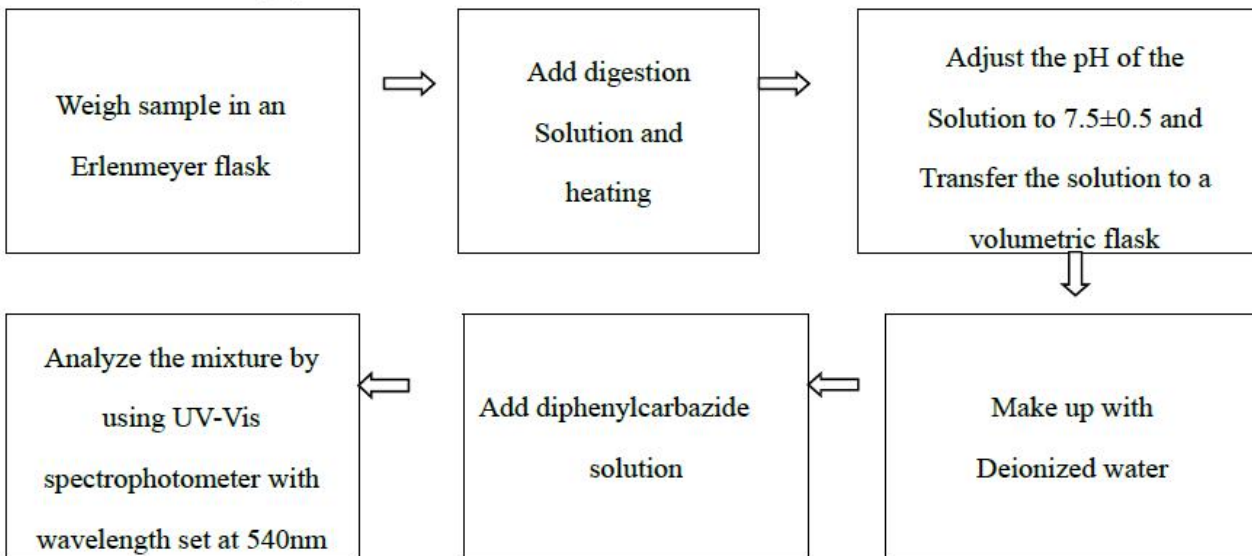
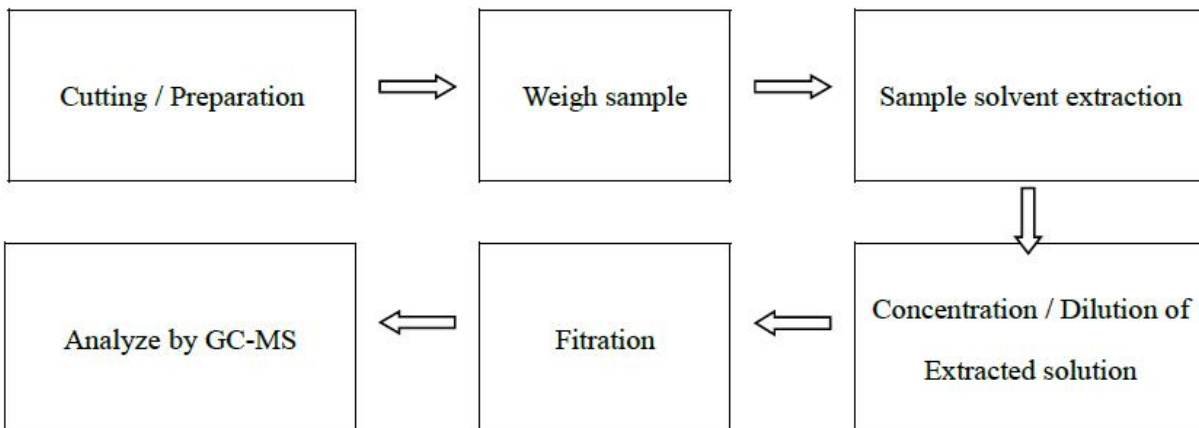
| No. | Test item (mg/kg) |      |      |      | Conclusion |
|-----|-------------------|------|------|------|------------|
|     | DBP               | BBP  | DEHP | DIBP |            |
| 2   | N.D.              | N.D. | N.D. | N.D. | PASS       |
| 5   | N.D.              | N.D. | N.D. | N.D. | PASS       |
| 6   | N.D.              | N.D. | N.D. | N.D. | PASS       |
| 7   | N.D.              | N.D. | N.D. | N.D. | PASS       |

## Note:

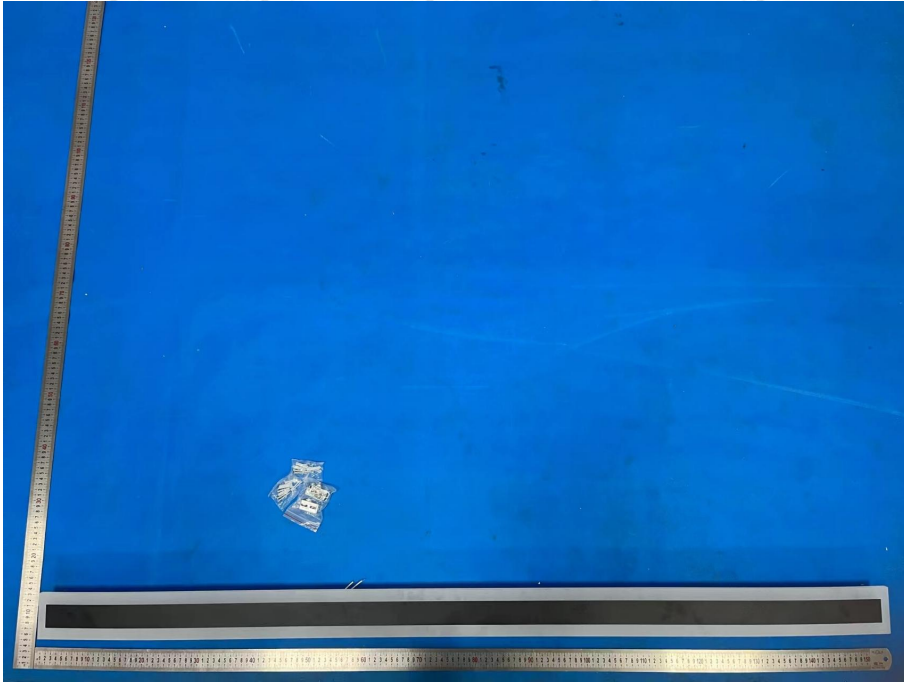
- mg/kg=0.0001%

-ND=Not Detected(&lt;MDL)

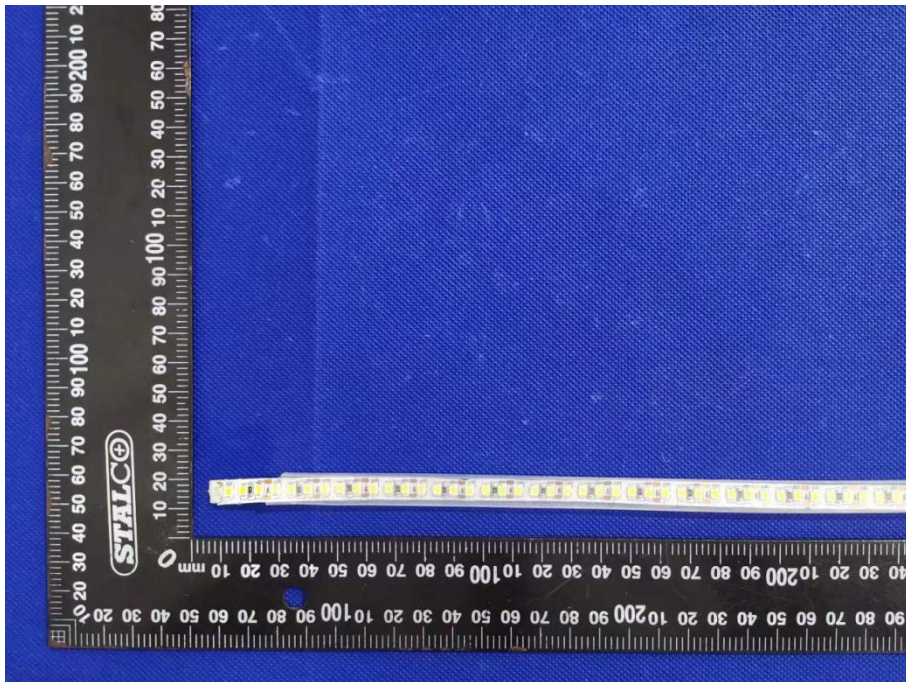
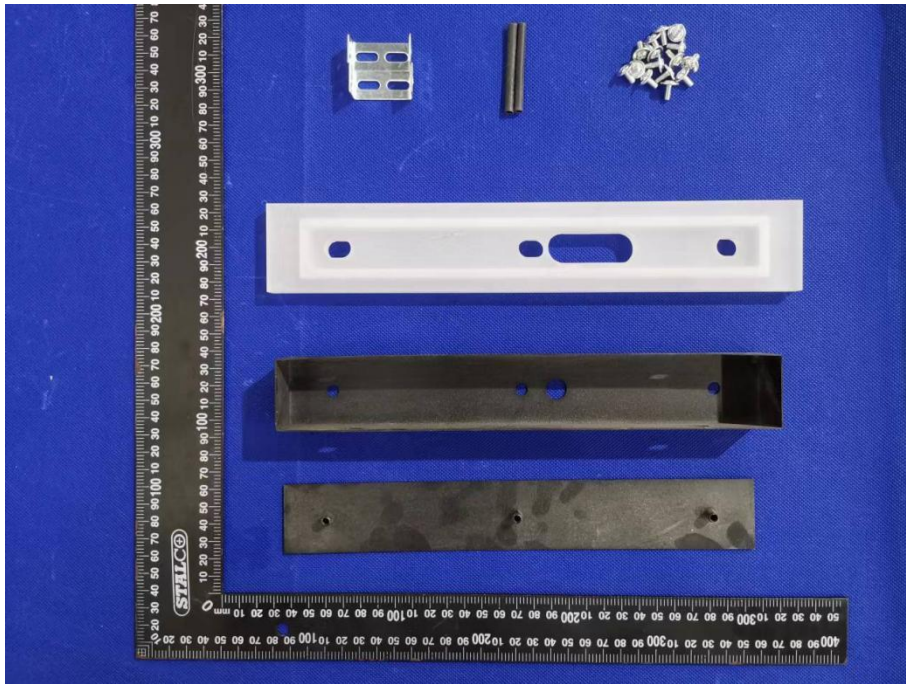
-\*1 = The samples were resubmitted on

**Test Process:**
**1. Test for Cd/Pb /Hg**

**2. Test for Chromium (VI) Content**

**3. Test for PBBs/PBDES/DIBP/DBP/BBP/DEHP Content**


Sample photo:







**END OF REPORT**