

# 承 认 书

## SPECIFICATION FOR APPROVAL

REV. 0.0

THE INFORMATION OF CUSTOMER 客户资料	
MESSRE: 客 户:	
承 认 印	Customer's signature
Model Type: 型 号	Network socket
Customer's P/N: 客户料号:	
Date of approval: 承认日期:	
PLEASE RETURN BY ONE COPY 样品确认后请回传一份	

THE INFORMATION OF RUICHUAN 瑞川资料	
Product name: 产品名称:	RCH-SP-32(带灯无弹) 黄绿 正负
Part No. : 产品料号:	SP32-8YG02001LB22 (RC01835)
Date of providing sample: 送样日期:	2023.08.15
(工程) 吴素飞 (审核)	林华宣 (批准)



温 州 瑞 川 电 子 有 限 公 司

WENZHOU RUICHUAN ELECTRONIC CO., LTD

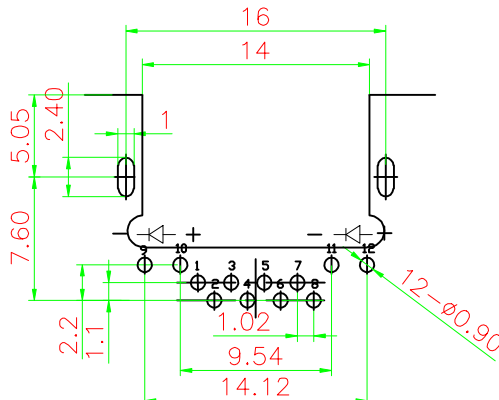
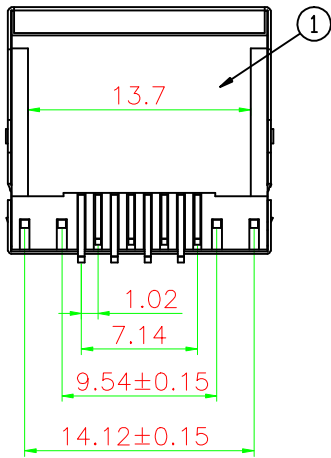
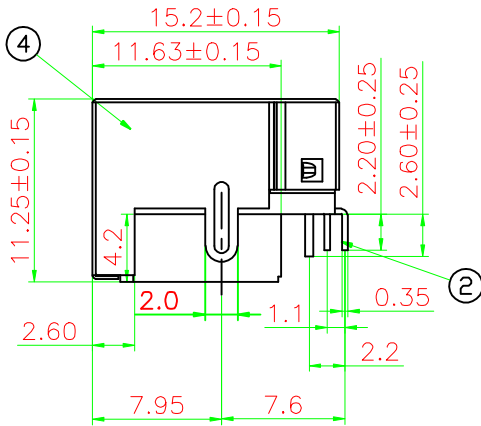
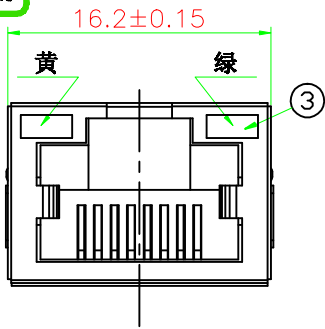
公司地址: 浙江省乐清市虹桥镇溪西兴发路788号  
NO. 788, Xixi Xingfa Road, Hongqiao Town, Yueqing City,  
Zhejiang Province

Tel. :0577-62338881

Fax. :0577-62388870

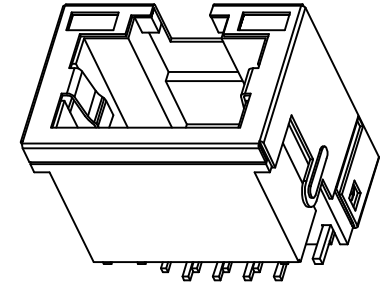
E-mail:wzruich@163.com

Http:www.wzruich.com



**General Specification**  
 Current Rating: 1.5A DC /Contact, 20mA DC for LED signals  
 Voltage Rating: 125V AC /Contact, 2.0 volts DC for LED signals  
 Operating Environment  
 Standard Temperature: -20℃~+70℃  
 Industrial Temperature: -40℃~+85℃  
 Humidity: 20~70%  
 Contact Resistance: ≤30mΩ  
 Insulation Resistance: ≥500MΩ  
 Dielectric Strength: 500V AC/(50HZ)/Min  
 Mating And Unmating Force: 3~20N  
 Durability: 750 Cycles Min

**Material Specification**  
 Housing :Thermo-plastic, UL94V-0.  
 Contact :Alloy Copper  
 Shield :Alloy Copper  
 Please refer to the customer drawing when customer has specified



X=2.8/4.2				
序号	名称	材料	数量	镀层/颜色 备注
4	外壳	H62	1	NI
3	LED灯	树脂/FE	2	NI/AG
2	插针	PHOSPHOR BRONZE	8	1U"
1	塑座	LCP	1	BLACK

网络插座外形图



温州瑞川电子有限公司  
 WEN ZHOU RUI CHUAN ELECTRONIC CO., LTD.

一般公差  
 30~ ±0.25  
 10~30 ±0.20  
 ~10 ±0.15  
 角度: ±2°  
 页面: 1 of 1

品名: RCH-SP-32(带灯无弹)黄绿 正负  
 料号: SP32-8YG02001LB22 (RC01835)  
 型号: RJ45 图号:  
 版本: 单位:mm 比例: 1:1 纸张: A4

版次	变更履历	变更单号	绘制	日期	核准	日期
A/0	新出版发行					



# 温州瑞川电子有限公司

## RJ45/RJ11插座系列产品技术参数

ModelType: 类型型号:	NETWORK CONNECTOR	版本	AO
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### 1. Scope/适用范围

This specification is applied to NETWORK CONNECTOR which is used for electric products.

本规格书适用于电子产品上的网络插座连接器。

### 2. 要求 Requirements

#### 2.1 一般规格 General Specification

2.1.1 额定电流 Current Rating: 1.5A DC / Contact, **20mA DC for LED signals**

2.1.2 额定电压 Voltage Rating: 125V AC / Contact, 2.0 volts DC for LED signals

#### 2.1.3 工作环境 Operating Environment

标准温度 Standard Temperature: -20°C ~ +70°C

工业温度 Industrial Temperature: -40°C ~ +85°C (根据客户要求 According to customer request)

湿度 Humidity: 20 ~ 70%

#### 2.1.4 储存环境 Storage Environment

温度 Temperature: -40 to +85°C

湿度 Humidity: 20% ~ 70%

#### 2.1.5 测试环境 Test Environment

温度 Temperature: +20°C ~ +30°C

湿度 Humidity: 25% ~ 65%

大气压 Atmospheric Pressure: 86-106KPA

### 3. Construction/说明

#### 3-1. Outline And Dimension/外观和尺寸

Outline and dimension of the jack shown be as attached assembled drawing.

插座的外观和尺寸应与附件图纸相符。

#### 3-2. Part And Material 部件和材料

The parts and materials shown be in material identification sheet and certification of material.

部件和材料应与材料清单规格一致。

### 4. Electrical efficiency/电气特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
4-1	Withstand voltage 耐电压	The Jack shall be withstanding 500V(AC 50/60Hz RMS) between mutually insulated pin contacts for one minute, Leakage current 0.5mA MAX. 在相互绝缘的接触脚之间, 插座能承受500V电压 (AC 50/60Hz RMS)并持续1分钟, 漏电流 0.5mA MAX。	No dielectric breakdown shall occur. 无击穿现象发生
4-2	Insulation resistance 绝缘阻抗	Using a 500 volts DC insulation resistance meter between mutually insulated terminals or metallic parts 在相互绝缘的端子、端子与外壳之间, 插座应能承受施加的500V直流电压。	100 MΩ MIN. 最小 1 0 0 兆欧
4-3	Contact resistance 接触电阻	measurement across a pair of mated contacts(20mV, 100mA max), for AC the frequency below 2KHz. 取一对匹配好的端子, 测量各端子的尾端点, 电压最大20mV, 电流量在100mA。对于交流测量, 此频率不超过2KHz。	30 MΩ MIN. 最大30毫欧

# 温州瑞川电子有限公司

## RJ45/RJ11插座系列产品技术参数

Model Type:	NETWORK CONNECTOR	版本	AO
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### 5. Mechanical efficiency 机械特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
5-1	Insertion and extraction force 插入和拔出力	the matching plug shall be inserted into the jack and extracted from the jack with the rate of 20-30 times/1 minute averagely (remove lock part) . 用相匹配的插头以每分钟20-30次的频率均速插头进行插拔（去除锁定装置）。	Insertion force is below 20N, extraction force is below 20N. 入插力小于20N, 拔出力小于20N.
5-2	Terminal strength 端子强度	Every terminal shall be capable of withstand a force of 5N (About 0.5kgf) for 10 seconds. 每个端子都应能承受5N (大约0.5kgf)的力, 并持续10秒。	Without loosing and breakdown, but deformation of terminal is accepted. 无松脱、破损等现象, 但是端子变形可以接受。

### 6. Durability / 耐久性能

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
6-1	Lifetest 寿命测试	The life test shall consist of 750 cycles of insertion and extraction with mated plug, at a rate of 20 to 30 cycles per minutes. 以每分钟20-30次的频率, 均速, 用相匹配的插头进行插拔750次。	The jack will not be destroyed Contact resistance: 30m Ω MIN. 产品没有被破坏, 接触电阻: 小于30毫欧。

### 7. Solderability / 焊锡试验

Item	Property 特性	Test condition 测试条件	Performance 判定
7-1	Resistance to soldering heat test 耐焊性试验	The jack terminal shall be dipped in solder under the condition as specified below: Temperature of solder: 260±3°C. Diptime: 5±1 1seconds. 端子浸入锡炉里, 按以下条件测试: 焊锡温度: 260±3°C. 浸入时间: 5±1 秒	The jack's appearance: housing shall not be transmutation, contact shall not be pulled out from housing. The jack shall be comply with paragraphs Electrical efficiency and Mechanical efficiency. 试验后塑胶基座不应变形, 端子无脱落。能满足机械特性的电气特性。

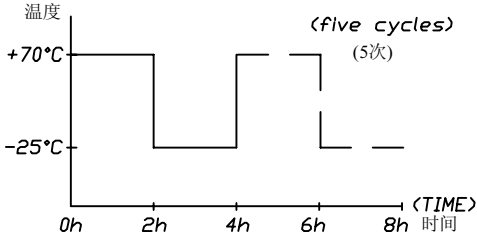
# 温州瑞川电子有限公司

## RJ45/RJ11插座系列产品技术参数

<b>Model Type:</b> 类型型号:	NETWORK CONNECTOR	版本	A0
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7-2	Soldering test 可焊性试验	Temperature of solder: $245 \pm 3^{\circ}\text{C}$ . Time of dip: $3 \pm 0.5$ seconds. Length of dip: 2.0 mm (from end of terminal). 焊锡温度: $245 \pm 3^{\circ}\text{C}$ . 浸入时间: $3 \pm 0.5$ 秒 浸入深度: 2.0 mm(从端子尾端开始).	Areas of soldering shall be capable of 95 % or more of dip terminal area. 端子顶端沾锡面积要求达到95 %以上.
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### 8. Environment test / 环境试验

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
8-1	Cold test 低温测试	The jack shall be subjected to temperature of $-25 \pm 2^{\circ}\text{C}$ for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 30 minutes. 将插座放置在 $-25 \pm 2^{\circ}\text{C}$ 低温条件下持续 96 小时，然后在室温条件下静置 30 分钟。	Appearance shall not be changed obviously. Contact resistance: $50\text{m}\ \Omega$ max. Withstand voltage: AC 500V。  外观无明显改变。 接触电阻：小于 50 毫欧。 耐电压： AC 500V。
8-2	Heat test 高温试验	The jack shall be subjected to temperature of $70 \pm 2^{\circ}\text{C}$ for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 30 minutes. 将插座放置在 $70 \pm 2^{\circ}\text{C}$ 高温条件下持续 96 小时，然后在室温条件下静置 30 分钟。	
8-3	Humidity test 耐湿试验	The jack shall be subjected to temperature of $40 \pm 2^{\circ}\text{C}$ and relative humidity of 90 % to 95% for a period of 96 hours. Upon completion of the exposure, dew drops shall be blown out and removed from the jack, after which the jack shall conditioned at room ambient conditions for 30 minutes. 将插座放置在温度为 $40 \pm 2^{\circ}\text{C}$ ，相对湿度为 90~95% 的环境下持续 96 小时。完成以上事项后，除去插座上的水珠，然后在室温条件下静置 30 分钟。	
8-4	Temperature cycling test 温度循环试验	The jack shall be subjected to conditions as shown in below, and then shall returned and allowed to remain in ambient condition for 30 minutes. 将插座放置于如下所示条件下进行试验，然后在室温条件下放置 30 分钟。  <div style="text-align: center;"> <p>(TEMPERATURE)</p>  <p>(five cycles) (5次)</p> <p>(TIME) 时间</p> </div>	

# 温州瑞川电子有限公司

## RJ45/RJ11插座系列产品技术参数

Model Type: 类型型号:	NETWORK CONNECTOR	版本	A0
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Item 项目	Property 特性	Test condition 测试条件	Performance 判定
8-5	Salt mist test 盐雾试验	Testing bath: The temperature shall be $35\text{ }^{\circ}\text{C}\pm 2^{\circ}\text{C}$ in the ambient of the jack during the test. Spray apparatus: The apparatus shall be capable of producing fine dense mist uniformly. Salt water: The concentration of the salt water shall be adjusted at $5\pm 1\%$ weight ratio at $35\text{ }^{\circ}\text{C}\pm 2^{\circ}\text{C}$ Testing time: 8 hours.  试验室: 在温度为 $35\pm 2^{\circ}\text{C}$ 条件下进行测试 喷雾设备: 设备应能承受均一浓度的盐雾 盐水浓度: 在温度为 $35\pm 2^{\circ}\text{C}$ 条件下, 盐水浓度为 $5\pm 1\%$ 测试时间: 8小时	Appearance shall not be extremely rust . 外观没有明显的生锈现象。

### 9. Test condition / 测试条件

The test and measurement, unless otherwise specified, shall be carry out at a temperature of  $5\text{ }^{\circ}\text{C}\sim 35^{\circ}\text{C}$ , relative humidity of  $45\%\sim 85\%$ , and atmospheric pressure of  $86\text{kPa}\sim 106\text{kPa}$ .

However, when any doubt arises on the judgment value under it, the test and measurement shall be carry out a temperature of  $20\pm 2^{\circ}\text{C}$ , relative humidity of  $60\%\sim 70\%$ , and atmospheric pressure of  $86\text{kPa}\sim 106\text{kPa}$ .

除非另有指定, 否则测试和测量温度在  $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$ , 相对湿度在  $45\%\sim 85\%$ , 气压在  $86\text{kPa}\sim 106\text{kPa}$  条件下进行。  
 当在这个条件下判定出现疑问时, 测试和测量在  $20\pm 2^{\circ}\text{C}$ , 相对湿度  $60\%\sim 70\%$ , 气压在  $86\text{kPa}\sim 106\text{kPa}$  条件下进行。

### 10. Amendment / 变更修正

When the amendment of this specification comes into necessity, it shall made by the mutual consultation and agreement between manufacture and customer.

当有必要对规格书进行变更修正时, 应该在制造商和客户共同商议及同意后才可以进行。

※ This specification is state with Chinese & English, Chinese is preferential while doubt in interpretation.  
 规格书同时记入中英文, 但发生疑义的场所以中文优先。



**WENZHOU RUICHUAN ELECTRONICS CO.,LTD**

**温州瑞川电子有限公司**

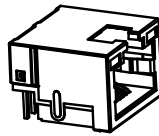
**Packing Specification(包装规格)**

**NO: RCH-PD-00-08**

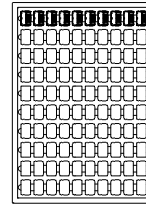
Model Type: 类型型号:	RJ45 NETWORK JACK	DESIGN 设计	CHECKED 审核	APPROVED 批准
Model No.: 料号:	RCH-SP-32-2.8(带灯无弹)			
Customer Part No.: 客户料号:				

**1 Carton**  
**=100 Pcs/ Box**  
**=50 Boxes/Carton**  
**=5000PCS/ Carton**

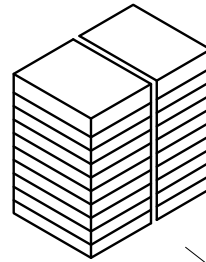
Product(产品)



Plastic Box (塑料盒)  
100pcs/box

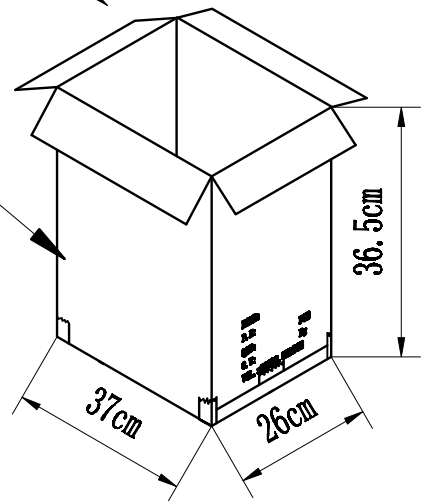


物料名称			
	数量		
物料代码	数量		
	数量		
出厂日期	年	月	日



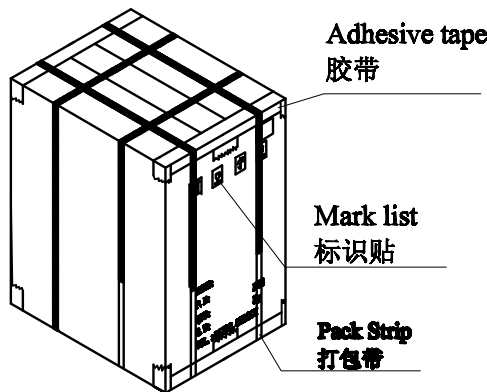
50boxes/carton

5000pcs/carton



**NOTE备注:**

- 1.Each Box have 100 products inside.  
每盒内装100只产品。
- 2.Each Carton have 50pcs boxes inside.  
每箱内装50盒。
- 3.Each carton have 5000 products inside. WZX-0000 Carton  
每个外箱内装5000只产品。 WZX-0000 外箱
4. ZX-0001 carton(Size:36.5X26X37cm)  
ZX-0001 外箱 (尺寸: 36.5X26X37cm)



Adhesive tape  
胶带

Mark list  
标识贴

Pack Strip  
打包带

Mark 标记	Date 日期	CHANGE 变更	CHECK 审核	APPRO. 批准	DESCRIPTION 描述



温州瑞川电子有限公司

# QC 工程图

文件编号

QP/RC-15-2022

产品名称

RCH-SP32 (带灯无弹)

制定日期

2023/8/15



## 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

頁數(Page): 1 of 13

華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as) :

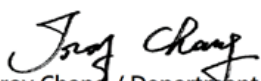
送樣廠商(Sample Submitted By) : SUMITOMO CHEMICAL CO., LTD.  
樣品名稱(Sample Name) : SUMIKASUPER LCP RESIN  
樣品型號(Style/Item No.) : SUMIKASUPER E6006LMR & E4008L & E5002L & E5006L & E5008L & E6008MR & E6008 & E6008KE & E4008MR & E6008MR & E6810MR & E6808UHFZ & E6807LHFZ & E6808LHFZ & E6808GHFZ & E6007LHFZ & E6810LHFZ & E6810KHFZ & E6810MR & E6007LHFMRZ & E6809U & SZ6709L & SZ6505HF & SZ6506HF & SV6808THF & SV6808GHF & SR1205L & SR2506 & SR2507 & E4205R


=====

收件日(Sample Receiving Date) : 27-Mar-2023  
測試期間(Testing Period) : 27-Mar-2023 to 31-Mar-2023

測試需求(Test Requested) : 依據客戶要求進行測試，測試項目請參閱測試結果表格。(Testing item(s) is/are specified by client. Please refer to result table for testing item(s).)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages.)

  
Troy Chang / Department Manager  
Signed for and on behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory - Taipei



PIN CODE: CA17AB03

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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

頁數(Page): 2 of 13

華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 測試部位敘述 (Test Part Description)

No.1 : 混測所有白色及米白色塑膠粒 (MIXED ALL WHITE AND CREAM PLASTIC PELLETS)

### 測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	2.16
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	參考IEC 62321-7-2: 2017 · 以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	n.d.
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.
十溴聯苯 (Decabromobiphenyl)		mg/kg	5	n.d.
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.

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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

頁數(Page): 3 of 13

華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		mg/kg	50	n.d.
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))		mg/kg	50	n.d.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)		mg/kg	50	n.d.
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)		mg/kg	50	n.d.
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)		mg/kg	50	n.d.

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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

頁數(Page): 4 of 13

華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016 · 以離子層析儀分析。 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	2400
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考DIN CEN/TS 15968: 2010 · 以液相層析串聯質譜儀分析。(With reference to DIN CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	參考DIN CEN/TS 15968: 2010 · 以液相層析串聯質譜儀分析。(With reference to DIN CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	參考US EPA 3052: 1996 · 以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
三氧化二銻 (Sb <sub>2</sub> O <sub>3</sub> ) (Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> )) (CAS No.: 1309-64-4)	由銻結果計算得之。(Calculated from the result of Antimony.)	mg/kg	2▲	n.d.
六溴環十二烷及所有主要被辨別出的異構物(HBCDD) (α- HBCDD, β- HBCDD, γ- HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321-9: 2021 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.

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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

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華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出) ; 小於MDL / Less than MDL
4. "-" = Not Regulated (無規格值)
5. 全氟辛烷磺酸及其鹽類包含等物質 (PFOS and its salts including) :  
CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.
6. 全氟辛酸及其鹽類包含等物質 (PFOA and its salts including) :  
CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.
7. ▲ : MDL是針對元素/測試化合物之評估。(The MDL was evaluated for element / tested substance.)  
換算公式 (Conversion Formula) :  $AX = A \times F$

AX	A	F
三氧化二銻 (Antimony trioxide) (Sb <sub>2</sub> O <sub>3</sub> )	銻 (Antimony)	1.1971

參數換算表 (Parameter Conversion Table) :

[https://eecloud.sgs.com/Region\\_TW/DocDownload.aspx?name=Others](https://eecloud.sgs.com/Region_TW/DocDownload.aspx?name=Others)

8. 樣品的測試是基於申請人要求混合測試。報告中的混合測試結果不代表其中個別單一材質的含量。  
The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

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華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

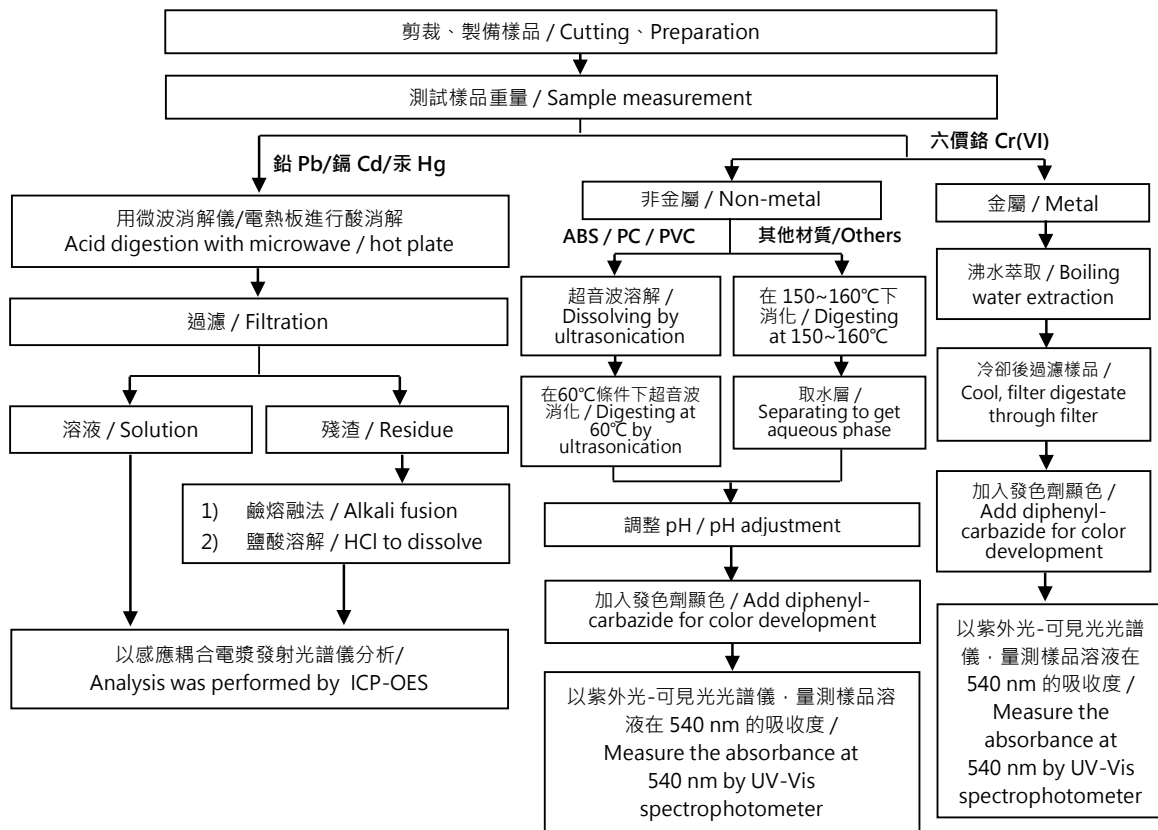
台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 重金屬流程圖 / Analytical flow chart of heavy metal

根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr<sup>6+</sup> test method excluded)



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## Test Report

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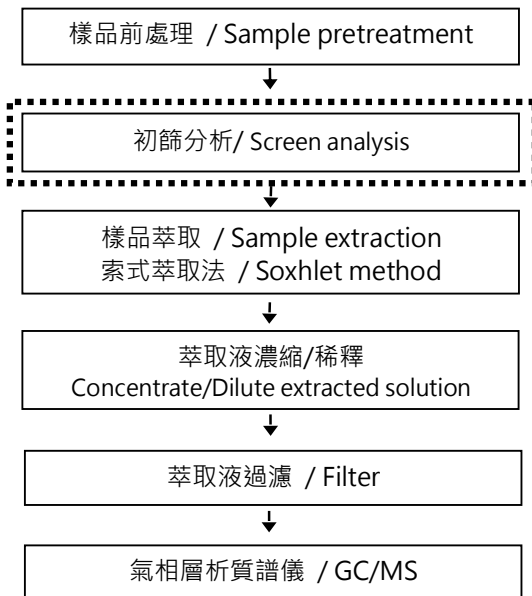
頁數(Page): 7 of 13

華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs

初次測試程序 / First testing process      —————→  
 選擇性篩檢程序 / Optional screen process      ······→  
 確認程序 / Confirmation process      - - - - -→



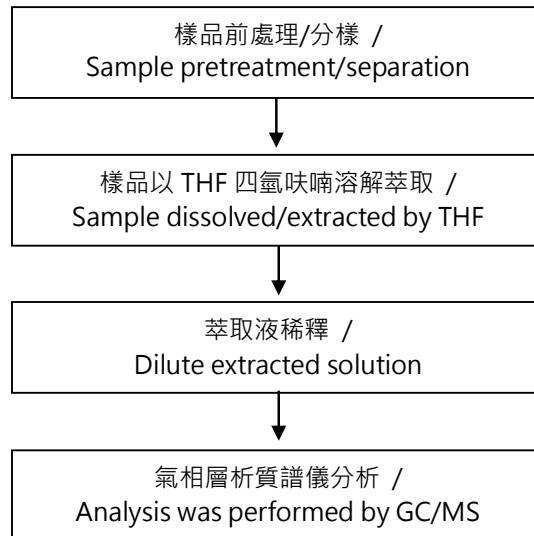
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台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

#### 【測試方法/Test method: IEC 62321-8】



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# 測試報告

## Test Report

號碼(No.): ETR23303806

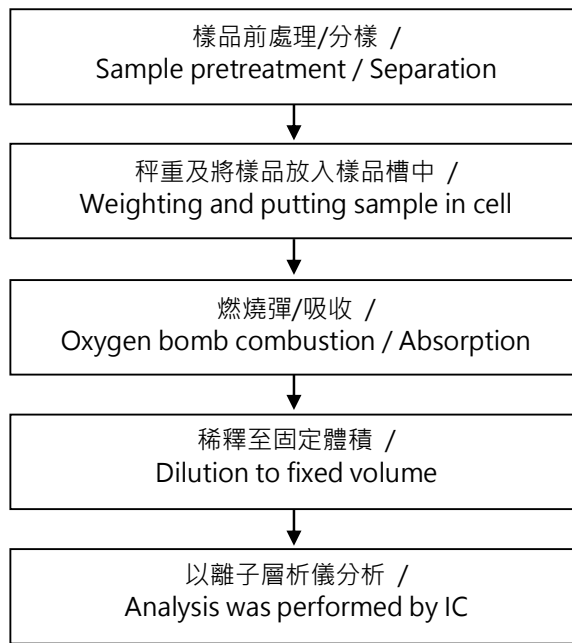
日期(Date): 31-Mar-2023

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### 鹵素分析流程圖 / Analytical flow chart - Halogen



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## 測試報告

## Test Report

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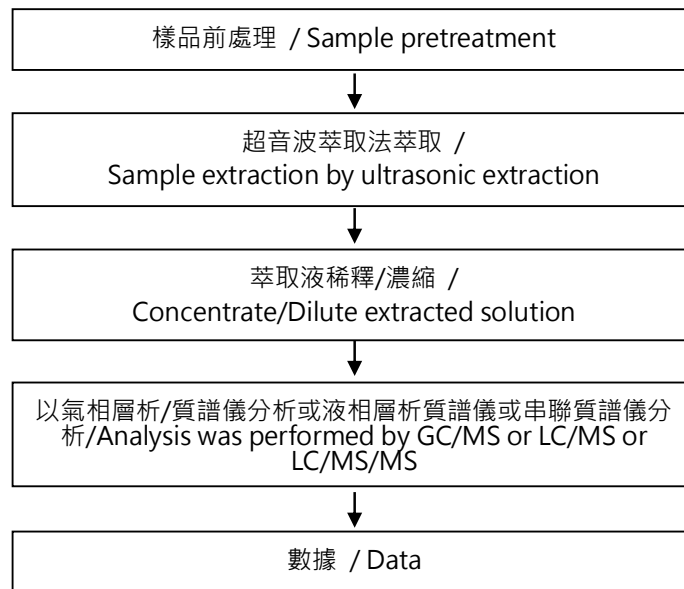
日期(Date): 31-Mar-2023

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華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



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# 測試報告

## Test Report

號碼(No.): ETR23303806

日期(Date): 31-Mar-2023

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華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

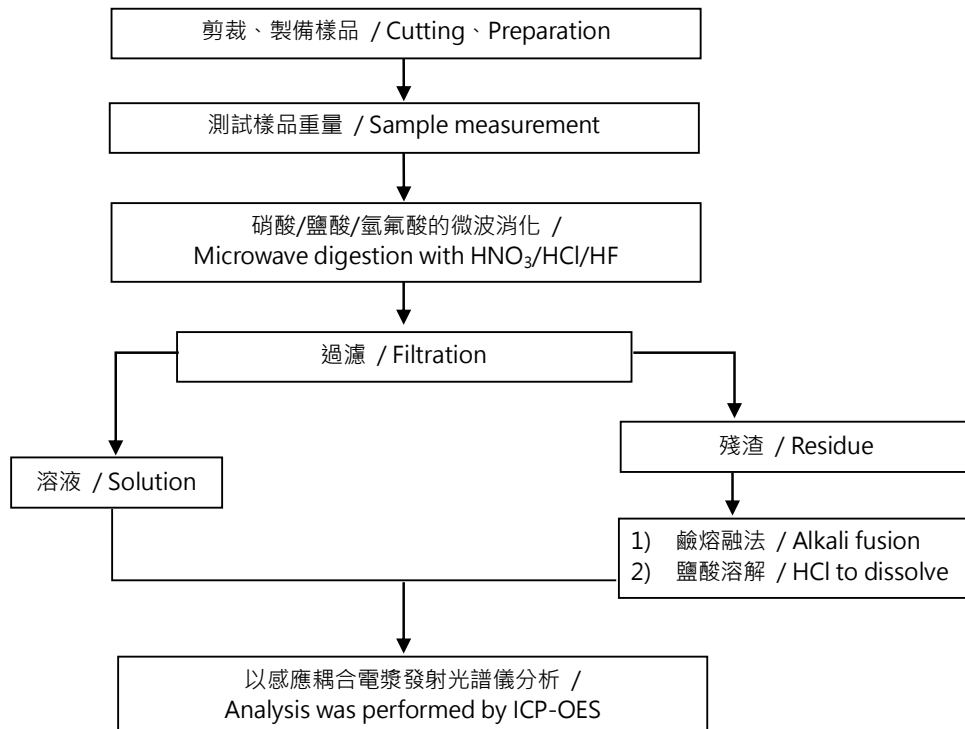
台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 元素(含重金屬)分析流程圖 / Analytical flow chart of elements (Heavy metal included)

根據以下的流程圖之條件，樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【參考方法/Reference method : US EPA 3051A、US EPA 3052】



\* US EPA 3051A 方法未添加氫氟酸 / US EPA 3051A method does not add HF.

## 測試報告

## Test Report

號碼(No.): ETR23303806

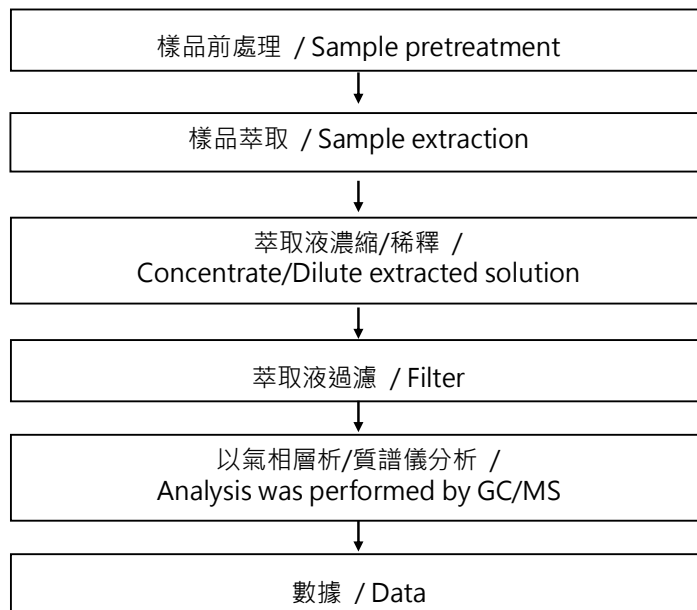
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台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



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華立企業股份有限公司 (WAH LEE INDUSTRIAL CORP.)

台北市復興北路369號11樓 (11F, NO. 369, FU-HSING N. ROAD, TAIPEI, 105 TAIWAN, R.O.C.)

\* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。\*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

### ETR23303806



\*\* 報告結尾 (End of Report) \*\*

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## 检测报告



报告编号 A223019538210104C

第 1 页共 7 页

报告抬头公司名称 乐清市亮度光电科技有限公司  
地址 浙江省乐清市乐成镇后所东片二区

以下测试之样品及样品信息由申请者提供并确认

样品名称 LED 发光二极管  
样品型号 LDTC-23404YD-3M  
样品颜色 黄色  
材料名称 铁材+环氧树脂  
样品接收日期 2023.04.27  
样品检测日期 2023.04.27-2023.05.06

检测要求 根据客户要求, 对所提交样品中的铅(Pb), 镉(Cd), 汞(Hg), 六价铬(Cr(VI)), 多溴联苯(PBBs), 多溴二苯醚(PBDEs), 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)进行测试。

检测依据/检测结果 请参见下页。



宁波市华测检测技术有限公司

杨启良  
实验室经理

日期

2023.05.06

No. R465023361

宁波高新区菁华路 76 号厂区东首第一、二层

# 检测报告

报告编号 A223019538210104C

第 2 页共 7 页

\*\*\*\*\*

## 结论

测试样品	依据标准/指令	结果
提交样品	欧盟 RoHS 指令 2011/65/EU 及其修订指令(EU) 2015/863	符合

\*\*\*\*\*

符合表示检测结果满足欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863要求的限值。

### 以下测试之样品及样品信息由申请者提供并确认

CTI 样品 ID	引用报告编号- CTI 样品 ID
007	/
008	A223019538210101C-002

### 备注:

上表格涉及到引用的样品本次未测试。根据客户声明,“引用报告编号- CTI 样品 ID”列与“CTI 样品 ID”列对应的样品为同材质。

# 检测报告

报告编号 A223019538210104C

第 3 页共 7 页

## 检测依据

测试项目	测试方法	测试仪器
铅(Pb)	IEC 62321-5:2013	ICP-OES
镉(Cd)	IEC 62321-5:2013	ICP-OES
汞(Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬(Cr(VI))	IEC 62321-7-2:2017 和/或 IEC 62321-5:2013 测试总铬含量	UV-Vis/ICP-OES
多溴联苯(PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚(PBDEs)	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS

## 检测结果

测试项目	结果	方法检出限	限值
	007		
铅(Pb)	N.D.	2 mg/kg	1000 mg/kg
镉(Cd)	N.D.	2 mg/kg	100 mg/kg
汞(Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬(Cr(VI))	N.D.	8 mg/kg	1000 mg/kg

测试项目	结果	方法检出限	限值
	007		
<b>多溴联苯(PBBs)</b>			
一溴联苯	N.D.	5 mg/kg	1000 mg/kg
二溴联苯	N.D.	5 mg/kg	
三溴联苯	N.D.	5 mg/kg	
四溴联苯	N.D.	5 mg/kg	
五溴联苯	N.D.	5 mg/kg	
六溴联苯	N.D.	5 mg/kg	
七溴联苯	N.D.	5 mg/kg	
八溴联苯	N.D.	5 mg/kg	
九溴联苯	N.D.	5 mg/kg	
十溴联苯	N.D.	5 mg/kg	



# 检测报告

报告编号 A223019538210104C

第 4 页共 7 页

测试项目	结果	方法检出限	限值
	007		
<b>多溴二苯醚(PBDEs)</b>			
一溴二苯醚	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚	N.D.	5 mg/kg	
三溴二苯醚	N.D.	5 mg/kg	
四溴二苯醚	N.D.	5 mg/kg	
五溴二苯醚	N.D.	5 mg/kg	
六溴二苯醚	N.D.	5 mg/kg	
七溴二苯醚	N.D.	5 mg/kg	
八溴二苯醚	N.D.	5 mg/kg	
九溴二苯醚	N.D.	5 mg/kg	
十溴二苯醚	N.D.	5 mg/kg	

测试项目	结果	方法检出限	限值
	007		
<b>邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)</b>			
邻苯二甲酸二异丁酯(DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二丁酯(DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸丁基苄基酯(BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基)己酯 (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg

## 样品/部位描述

序号	CTI 样品 ID	描述
1	007	黄色固体

**备注:** 对于检测铅, 镉, 汞之样品已消解完全。

-N.D. = 未检出 (小于方法检出限)

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

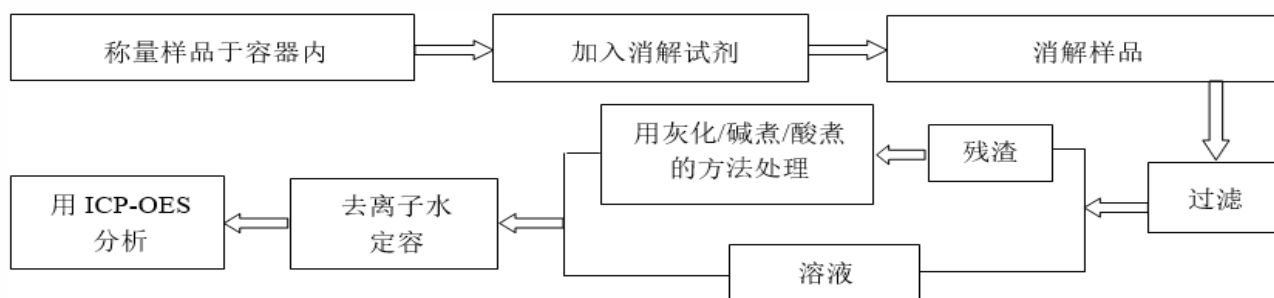
## 检测报告

报告编号 A223019538210104C

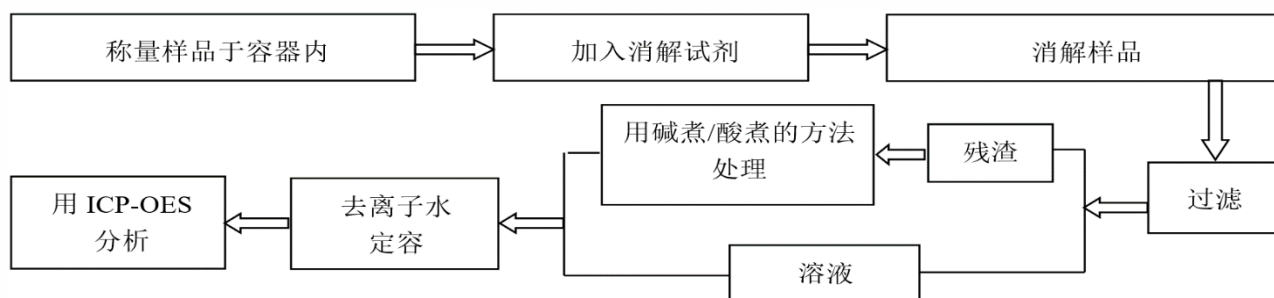
第 5 页共 7 页

### 检测流程

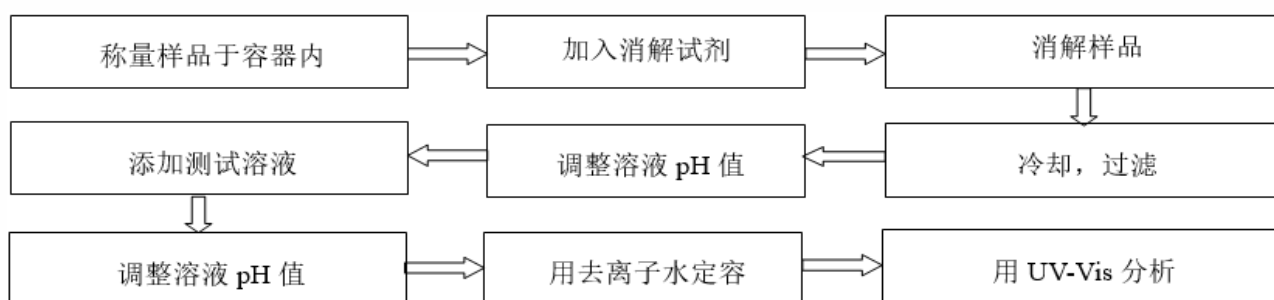
#### 1. 铅(Pb), 镉(Cd), 铬(Cr)



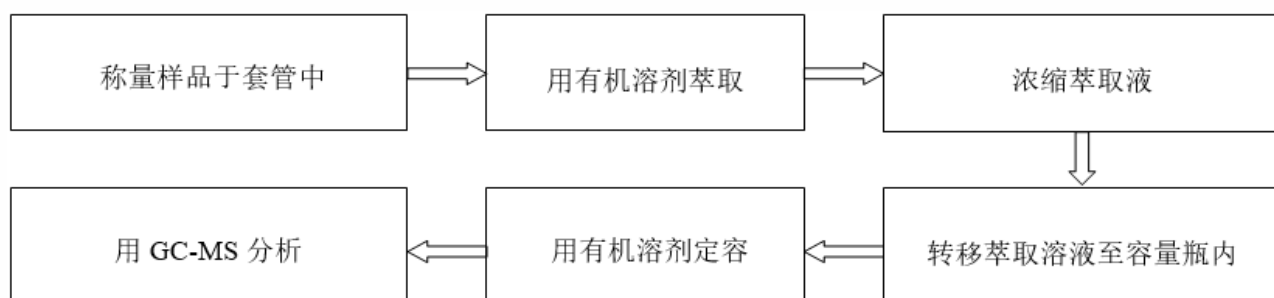
#### 2. 汞(Hg)



#### 3. 六价铬(Cr(VI))



#### 4. 多溴二苯醚(PBDEs), 多溴联苯(PBBs)

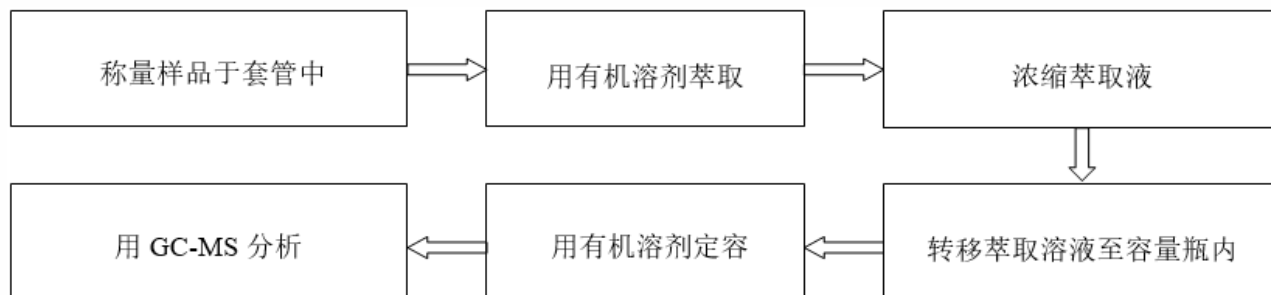


# 检测报告

报告编号 A223019538210104C

第 6 页共 7 页

## 5. 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)



## 检测报告

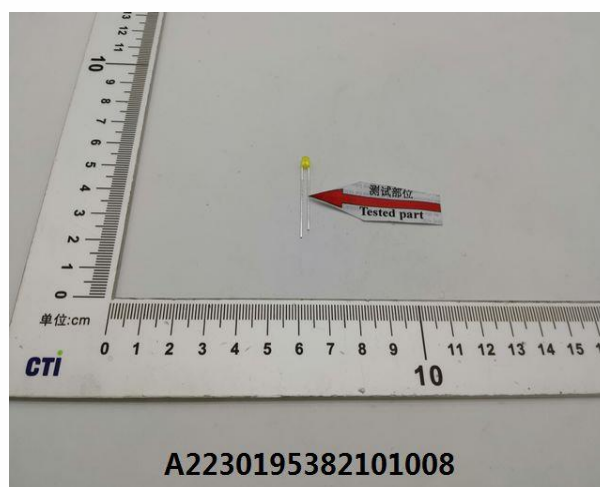
报告编号 A223019538210104C

第 7 页共 7 页

### 样品图片



客户参考图片(非测试样品)



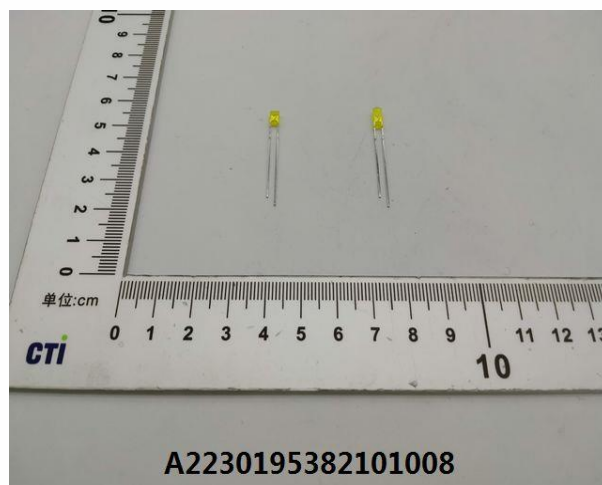
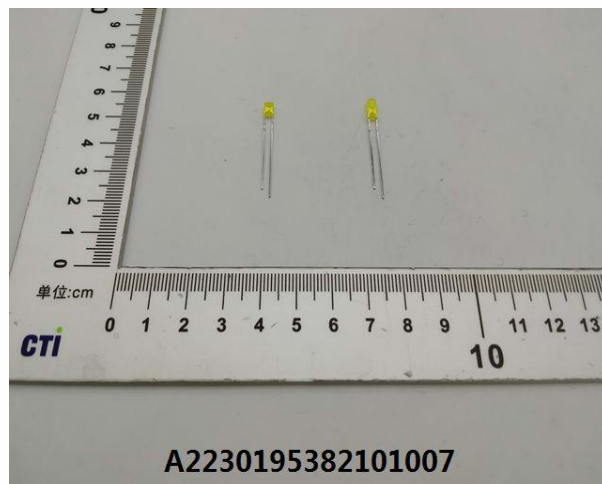
#### 声明:

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;
3. 本报告检测结果仅对受测样品负责;
4. 未经 CTI 书面同意, 不得部分复制本报告。

\*\*\* 报告结束 \*\*\*

## 附录

客户参考图片（非测试样品）



### 声明:

1. 附录内容由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性。
2. 附录内容为 A223019538210104C 报告的补充。

# 检测报告



报告编号 A223019538210103C

第 1 页共 7 页

报告抬头公司名称 乐清市亮度光电科技有限公司  
地址 浙江省乐清市乐成镇后所东片二区

以下测试之样品及样品信息由申请者提供并确认

样品名称 LED 发光二极管  
样品型号 LDTC-23404GD-3M  
样品颜色 绿色  
材料名称 铁材+环氧树脂  
样品接收日期 2023.04.27  
样品检测日期 2023.04.27-2023.05.06

检测要求 根据客户要求, 对所提交样品中的铅(Pb), 镉(Cd), 汞(Hg), 六价铬(Cr(VI)), 多溴联苯(PBBs), 多溴二苯醚(PBDEs), 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)进行测试。

检测依据/检测结果 请参见下页。



*杨启良*

日期

2023.05.06

杨启良  
实验室经理

No. R465023361

宁波高新区菁华路 76 号厂区东首第一、二层

# 检测报告

报告编号 A223019538210103C

第 2 页共 7 页

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## 结论

测试样品	依据标准/指令	结果
提交样品	欧盟 RoHS 指令 2011/65/EU 及其修订指令(EU) 2015/863	符合

\*\*\*\*\*

符合表示检测结果满足欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863要求的限值。

### 以下测试之样品及样品信息由申请者提供并确认

CTI 样品 ID	引用报告编号- CTI 样品 ID
005	/
006	A223019538210101C-002

### 备注:

上表格涉及到引用的样品本次未测试。根据客户声明,“引用报告编号- CTI 样品 ID”列与“CTI 样品 ID”列对应的样品为同材质。

# 检测报告

报告编号 A223019538210103C

第 3 页共 7 页

## 检测依据

测试项目	测试方法	测试仪器
铅(Pb)	IEC 62321-5:2013	ICP-OES
镉(Cd)	IEC 62321-5:2013	ICP-OES
汞(Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬(Cr(VI))	IEC 62321-7-2:2017 和/或 IEC 62321-5:2013 测试总铬含量	UV-Vis/ICP-OES
多溴联苯(PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚(PBDEs)	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS

## 检测结果

测试项目	结果	方法检出限	限值
	005		
铅(Pb)	N.D.	2 mg/kg	1000 mg/kg
镉(Cd)	N.D.	2 mg/kg	100 mg/kg
汞(Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬(Cr(VI))	N.D.	8 mg/kg	1000 mg/kg

测试项目	结果	方法检出限	限值
	005		
<b>多溴联苯(PBBs)</b>			
一溴联苯	N.D.	5 mg/kg	1000 mg/kg
二溴联苯	N.D.	5 mg/kg	
三溴联苯	N.D.	5 mg/kg	
四溴联苯	N.D.	5 mg/kg	
五溴联苯	N.D.	5 mg/kg	
六溴联苯	N.D.	5 mg/kg	
七溴联苯	N.D.	5 mg/kg	
八溴联苯	N.D.	5 mg/kg	
九溴联苯	N.D.	5 mg/kg	
十溴联苯	N.D.	5 mg/kg	



# 检测报告

报告编号 A223019538210103C

第 4 页共 7 页

测试项目	结果	方法检出限	限值
	005		
<b>多溴二苯醚(PBDEs)</b>			
一溴二苯醚	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚	N.D.	5 mg/kg	
三溴二苯醚	N.D.	5 mg/kg	
四溴二苯醚	N.D.	5 mg/kg	
五溴二苯醚	N.D.	5 mg/kg	
六溴二苯醚	N.D.	5 mg/kg	
七溴二苯醚	N.D.	5 mg/kg	
八溴二苯醚	N.D.	5 mg/kg	
九溴二苯醚	N.D.	5 mg/kg	
十溴二苯醚	N.D.	5 mg/kg	

测试项目	结果	方法检出限	限值
	005		
<b>邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)</b>			
邻苯二甲酸二异丁酯(DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二丁酯(DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸丁基苄基酯(BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基)己酯 (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg

## 样品/部位描述

序号	CTI 样品 ID	描述
1	005	绿色固体

备注: 对于检测铅, 镉, 汞之样品已消解完全。

-N.D. = 未检出 (小于方法检出限)

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

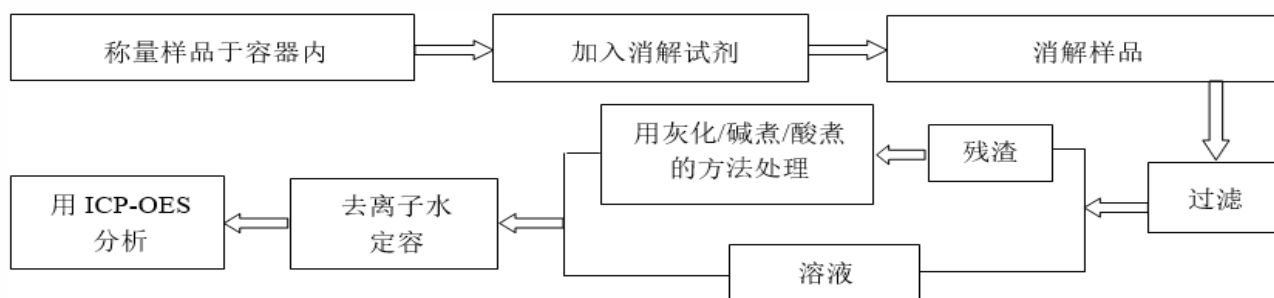
## 检测报告

报告编号 A223019538210103C

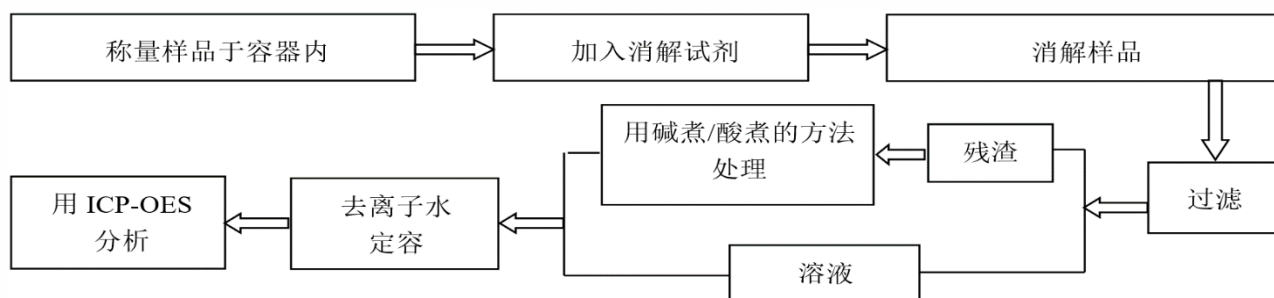
第 5 页共 7 页

### 检测流程

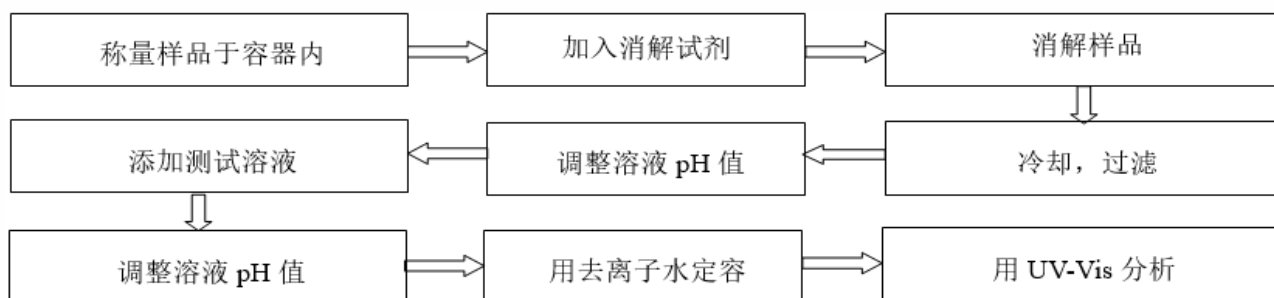
#### 1. 铅(Pb), 镉(Cd), 铬(Cr)



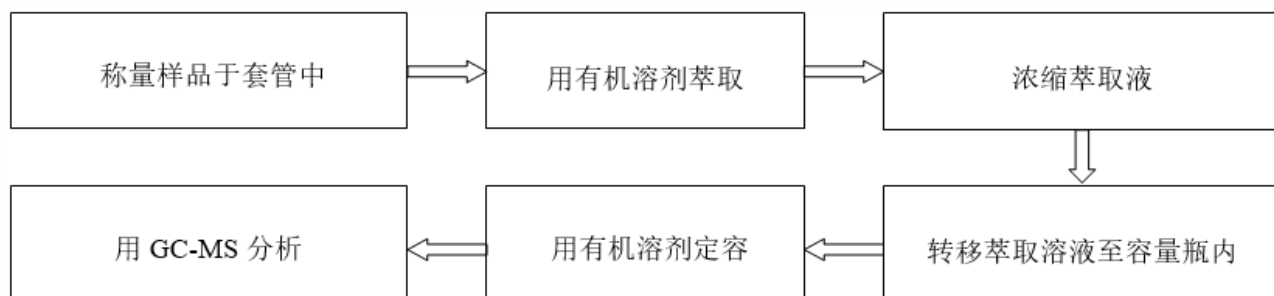
#### 2. 汞(Hg)



#### 3. 六价铬(Cr(VI))



#### 4. 多溴二苯醚(PBDEs), 多溴联苯(PBBs)

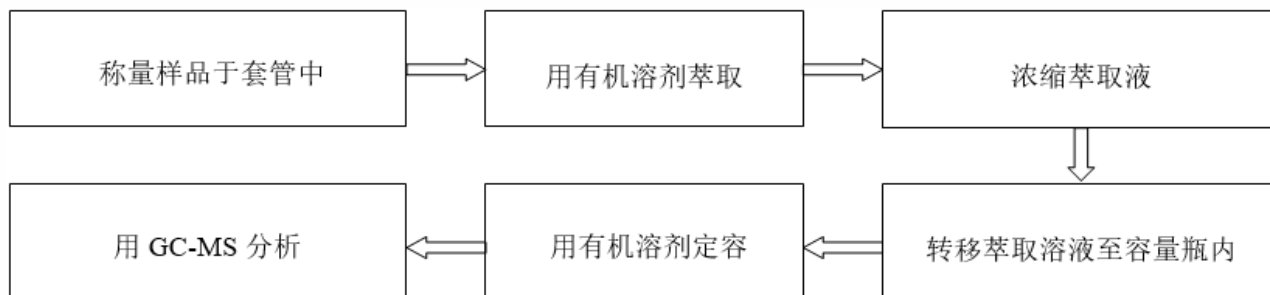


# 检测报告

报告编号 A223019538210103C

第 6 页共 7 页

## 5. 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)

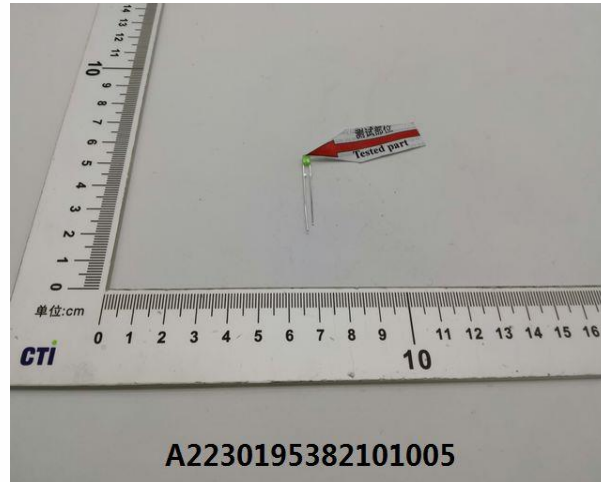


# 检测报告

报告编号 A223019538210103C

第 7 页共 7 页

## 样品图片



客户参考图片(非测试样品)



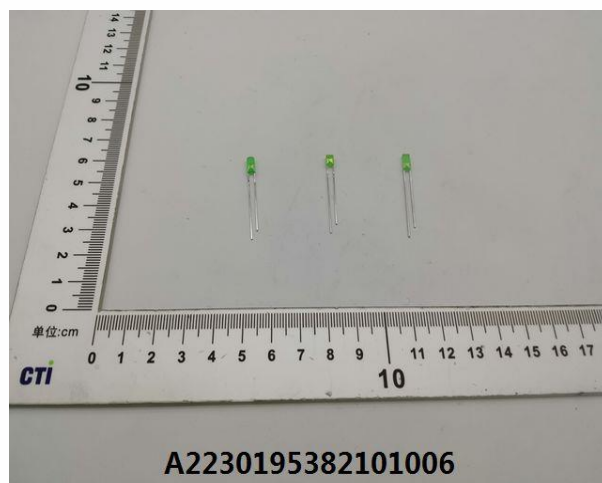
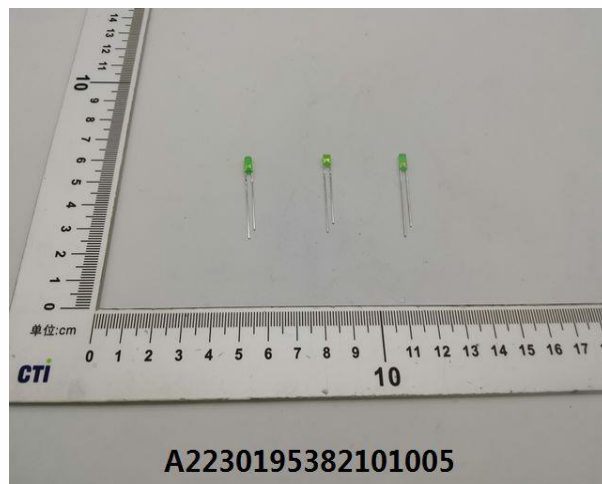
### 声明:

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;
3. 本报告检测结果仅对受测样品负责;
4. 未经 CTI 书面同意, 不得部分复制本报告。

\*\*\* 报告结束 \*\*\*

## 附录

客户参考图片（非测试样品）



### 声明:

1. 附录内容由申请者提供，申请者应对其真实性负责，CTI 未核实其真实性。
2. 附录内容为 A223019538210103C 报告的补充。

## 检测报告

编号: SHAEC23000057316

日期: 2023年01月09日

第1页, 共7页

客户名称: 江西云泰铜业有限公司  
客户地址: 江西省贵溪市经济开发区区贵八路8号

样品名称: C5191

以上样品及信息由客户提供。

SGS 工作编号: SP23-000029  
样品接收时间: 2023年01月04日  
检测周期: 2023年01月04日 - 2023年01月09日  
检测要求: 根据客户要求检测。  
检测方法: 见后续页。  
检测结果: 见后续页。

检测要求	结论
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅,汞,镉,六价铬,多溴联苯(PBBs),多溴二苯醚(PBDEs)	符合

通标标准技术服务(上海)有限公司  
授权签名

罗萍

Carol Luo 罗萍  
批准签署人

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Testing Center - Chemical Laboratory

3<sup>rd</sup> Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgs.com.cn  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21) 61156899 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

# 检测报告

编号: SHAEC23000057316

日期: 2023年01月09日

第2页, 共7页

## 检测结果:

### 检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A7	SHA23-0000573-0001.C007	铜色金属

### 备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL= 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

### 欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅,汞,镉,六价铬,

### 多溴联苯(PBBs),多溴二苯醚(PBDEs)

检测方法: 参考 IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 和 IEC 62321-6:2015, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A7
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1000	mg/kg	2	8
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯(MonoBB)	-	mg/kg	5	ND
二溴联苯(DiBB)	-	mg/kg	5	ND
三溴联苯(TriBB)	-	mg/kg	5	ND
四溴联苯(TetraBB)	-	mg/kg	5	ND
五溴联苯(PentaBB)	-	mg/kg	5	ND
六溴联苯(HexaBB)	-	mg/kg	5	ND
七溴联苯(HeptaBB)	-	mg/kg	5	ND
八溴联苯(OctaBB)	-	mg/kg	5	ND
九溴联苯(NonaBB)	-	mg/kg	5	ND
十溴联苯(DecaBB)	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚(MonoBDE)	-	mg/kg	5	ND
二溴二苯醚(DiBDE)	-	mg/kg	5	ND
三溴二苯醚(TriBDE)	-	mg/kg	5	ND
四溴二苯醚(TetraBDE)	-	mg/kg	5	ND
五溴二苯醚(PentaBDE)	-	mg/kg	5	ND
六溴二苯醚(HexaBDE)	-	mg/kg	5	ND
七溴二苯醚(HeptaBDE)	-	mg/kg	5	ND
八溴二苯醚(OctaBDE)	-	mg/kg	5	ND
九溴二苯醚(NonaBDE)	-	mg/kg	5	ND



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# 检测报告

编号: SHAEC23000057316

日期: 2023年01月09日

第3页, 共7页

检测项目	限值	单位	MDL	A7
十溴二苯醚(DecaBDE)	-	mg/kg	5	ND

**备注:**

- (1) 最大允许限值引用自RoHS指令(EU) 2015/863。
- (2) IEC 62321系列等同于 EN 62321系列。
- (3) ▼ = a. 当六价铬的浓度高于0.13 µg/cm<sup>2</sup>时, 样品为阳性, 即含有六价铬;  
 b. 当六价铬的浓度为ND (低于0.10 µg/cm<sup>2</sup>) 时, 样品为阴性, 即未检测到六价铬;  
 c. 当六价铬的浓度介于0.10 µg/cm<sup>2</sup>与0.13 µg/cm<sup>2</sup>之间时, 无法直接判定是否检测到六价铬, 因不同个体的样品表面差异可能会影响测定结果。

由于未获知样品的存储条件和生产日期, 样品的六价铬检测结果仅能代表测试时样品含六价铬的状态。

除非另有说明, 参照 ILAC-G8:09/2019, 使用简单接受 (w=0) 的二元判定规则进行符合性判定。  
 除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。  
 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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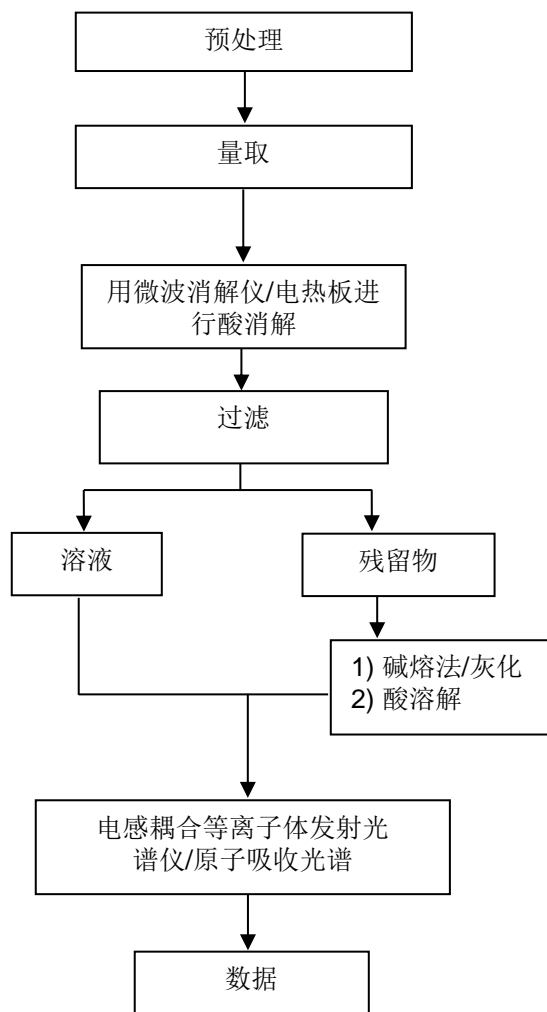
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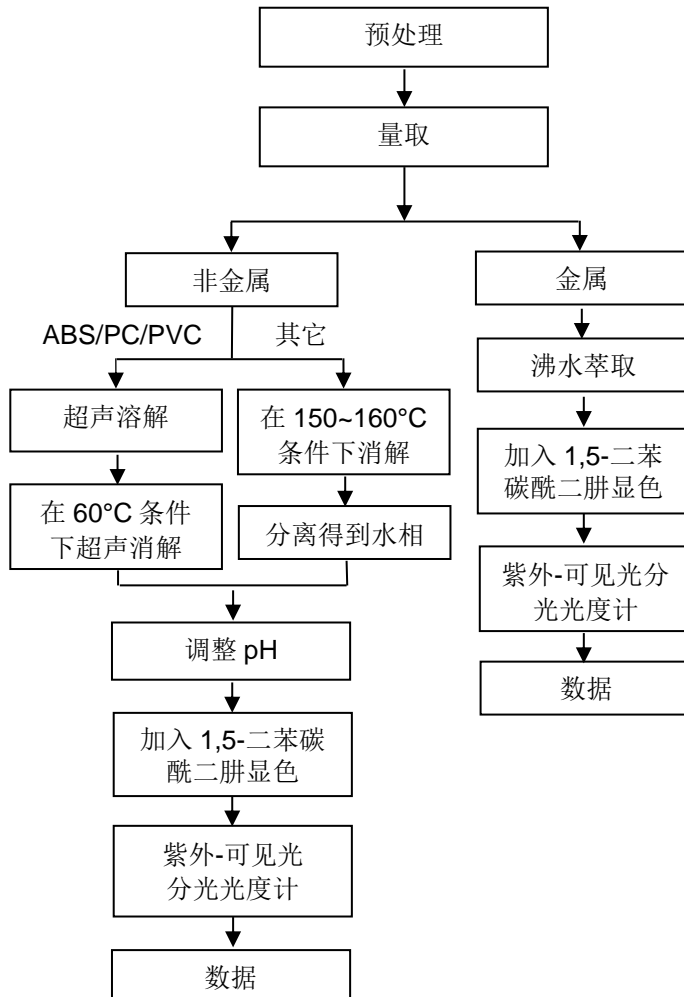


### 元素 (IEC62321) 检测流程图

样品按照下述流程被完全消解



### 六价铬检测流程图



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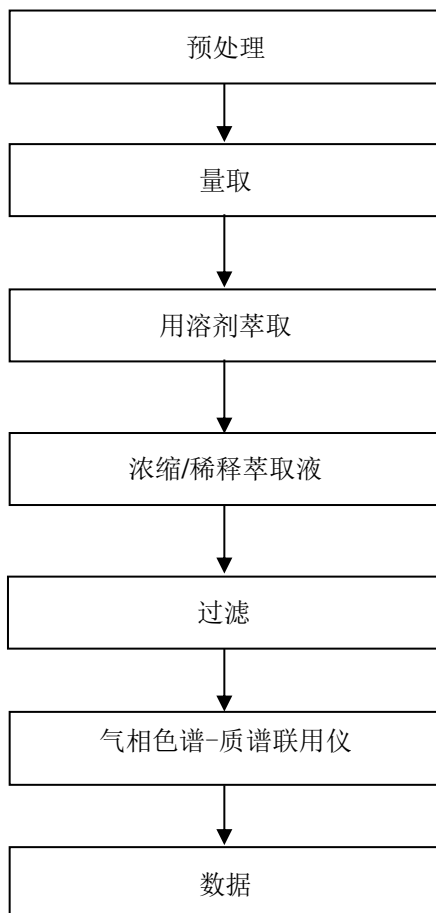
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### PBBs/PBDEs 检测流程图



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## 检测报告

编号: SHAEC23000057316

日期: 2023年01月09日

第7页, 共7页

样品照片:



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## 检测报告

编号: SHAEC23000057312

日期: 2023年01月09日

第1页, 共7页

客户名称: 江西云泰铜业有限公司  
客户地址: 江西省贵溪市经济开发区区贵八路8号

样品名称: H62

以上样品及信息由客户提供。

SGS 工作编号: SP23-000029  
样品接收时间: 2023年01月04日  
检测周期: 2023年01月04日 - 2023年01月09日  
检测要求: 根据客户要求检测。  
检测方法: 见后续页。  
检测结果: 见后续页。

检测要求	结论
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅,汞,镉,六价铬,多溴联苯(PBBs),多溴二苯醚(PBDEs)	符合

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罗萍

Carol Luo 罗萍  
批准签署人

scan to see the report



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## 检测报告

编号: SHAEC23000057312

日期: 2023年01月09日

第2页, 共7页

### 检测结果:

#### 检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A6	SHA23-0000573-0001.C006	金色金属

#### 备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL= 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

### 欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅,汞,镉,六价铬,

### 多溴联苯(PBBs),多溴二苯醚(PBDEs)

检测方法: 参考 IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 和 IEC 62321-6:2015, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A6
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1000	mg/kg	2	44
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯(MonoBB)	-	mg/kg	5	ND
二溴联苯(DiBB)	-	mg/kg	5	ND
三溴联苯(TriBB)	-	mg/kg	5	ND
四溴联苯(TetraBB)	-	mg/kg	5	ND
五溴联苯(PentaBB)	-	mg/kg	5	ND
六溴联苯(HexaBB)	-	mg/kg	5	ND
七溴联苯(HeptaBB)	-	mg/kg	5	ND
八溴联苯(OctaBB)	-	mg/kg	5	ND
九溴联苯(NonaBB)	-	mg/kg	5	ND
十溴联苯(DecaBB)	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚(MonoBDE)	-	mg/kg	5	ND
二溴二苯醚(DiBDE)	-	mg/kg	5	ND
三溴二苯醚(TriBDE)	-	mg/kg	5	ND
四溴二苯醚(TetraBDE)	-	mg/kg	5	ND
五溴二苯醚(PentaBDE)	-	mg/kg	5	ND
六溴二苯醚(HexaBDE)	-	mg/kg	5	ND
七溴二苯醚(HeptaBDE)	-	mg/kg	5	ND
八溴二苯醚(OctaBDE)	-	mg/kg	5	ND
九溴二苯醚(NonaBDE)	-	mg/kg	5	ND



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# 检测报告

编号: SHAEC23000057312

日期: 2023年01月09日

第3页, 共7页

检测项目	限值	单位	MDL	A6
十溴二苯醚(DecaBDE)	-	mg/kg	5	ND

**备注:**

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863。
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- (3) ▼ = a. 当六价铬的浓度高于0.13 µg/cm<sup>2</sup>时, 样品为阳性, 即含有六价铬;  
 b. 当六价铬的浓度为ND (低于0.10 µg/cm<sup>2</sup>) 时, 样品为阴性, 即未检测到六价铬;  
 c. 当六价铬的浓度介于0.10 µg/cm<sup>2</sup>与0.13 µg/cm<sup>2</sup>之间时, 无法直接判定是否检测到六价铬, 因不同个体的样品表面差异可能会影响测定结果。

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 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



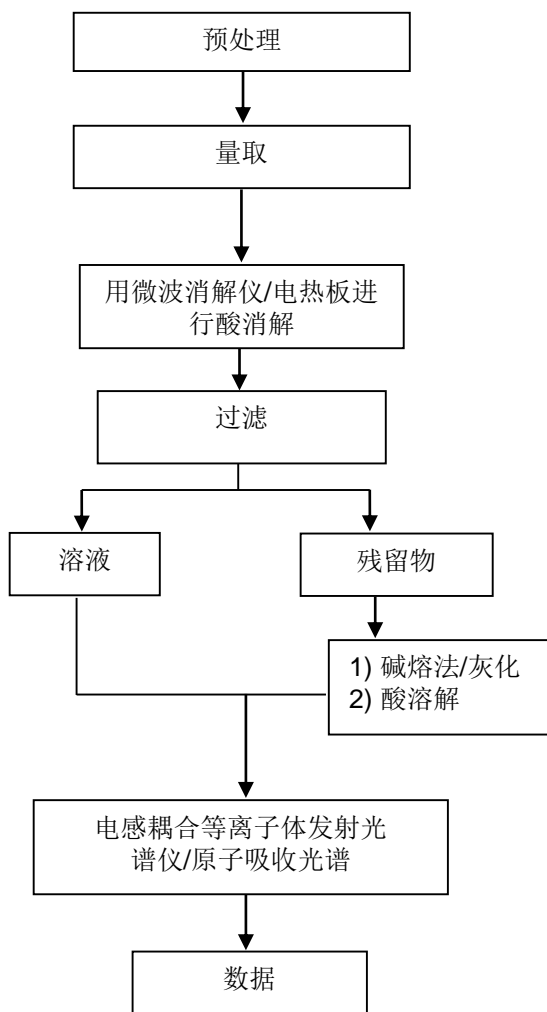
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### 元素 (IEC62321) 检测流程图

样品按照下述流程被完全消解

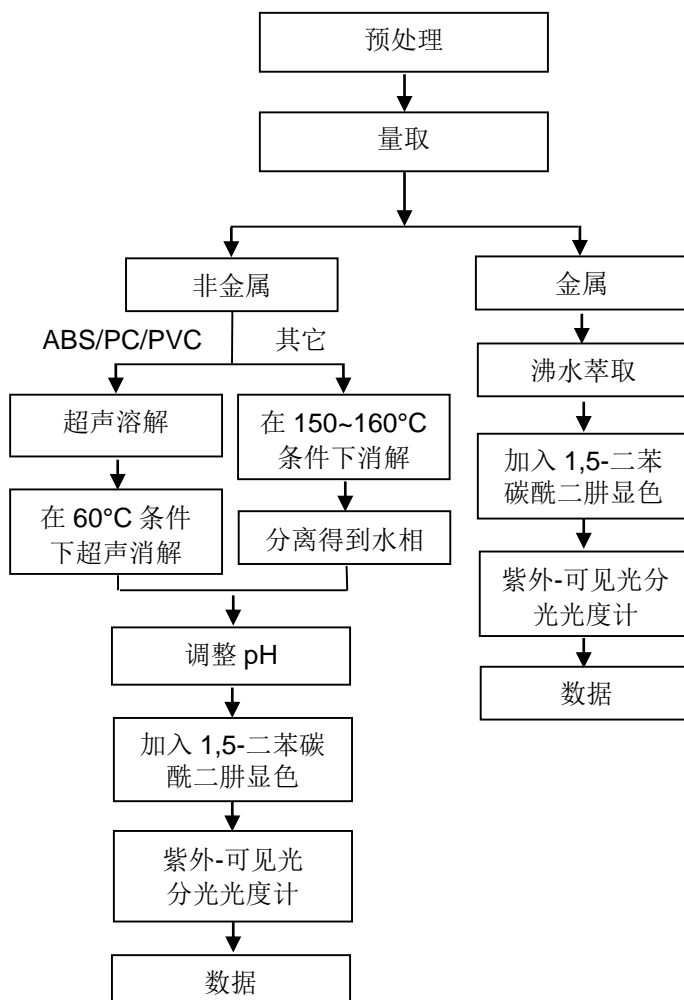


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### 六价铬检测流程图



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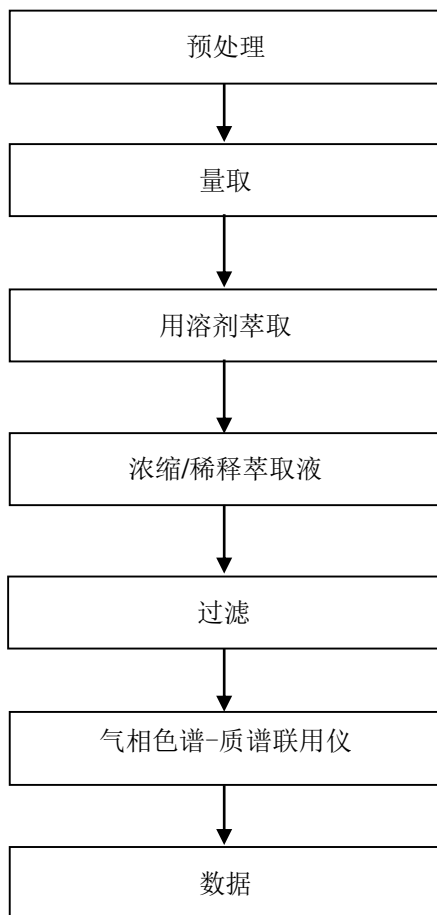
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### PBBs/PBDEs 检测流程图



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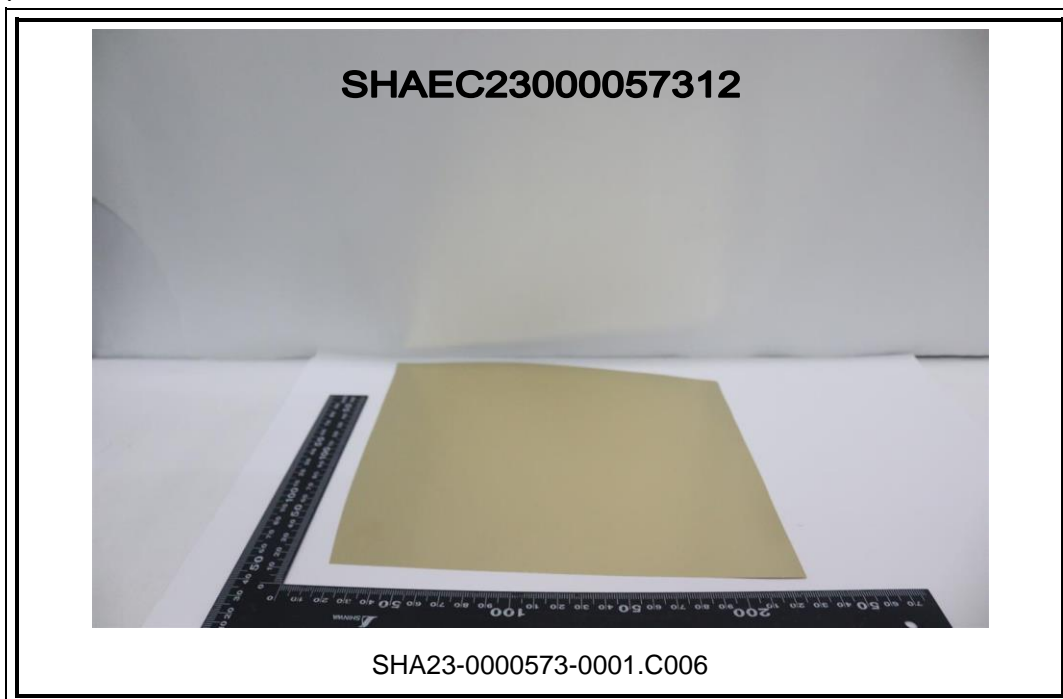
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