

检测报告  
Test Report

报告编号 ECL01J034370001E  
Report No. ECL01J034370001E

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申请单位 南京华鼎电子有限公司  
Applicant PARA LIGHT NANJING ELECTRONICS CO.,LTD.  
地 址 中国南京市汤山镇  
Address TANGSHAN TOWN,NANJING,CHINA

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

样品名称 Sample Name LED-SMD  
样品接收日期 2017.06.10  
Sample Received Date Jun. 10, 2017  
样品检测日期 2017.06.10-2017.06.14  
Testing Period Jun. 10, 2017 to Jun. 14, 2017

## 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, 氟(F), 氯(Cl), 溴(Br), 碘(I)进行测试。

## Test Requested

As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates, (F), Chlorine (Cl), Bromine (Br), Iodine (I) in the submitted sample(s).

## 检测依据和检测结果

请参见下页

Test Method & Test Result(s) Please refer to following page(s).

主 检  
Tested by

金玲红

审 核  
Reviewed by

陶英

批 准  
Approved by

苏红伟

日 期  
Date

2017.06.14

苏红伟

实验室高级经理 Senior Laboratory Manager

上海华测品标检测技术有限公司  
Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No. R295821766  
上海市浦东新区新金桥路 1996 号  
No. 1996, Xinjinqiao Road, Pudong New District, Shanghai, China

检验检测专用章  
Inspection & Testing Services

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### 检测依据 Test Method

测试项目 Tested Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅(Pb) Lead (Pb), 镉(Cd) Cadmium (Cd), 汞(Hg) Mercury (Hg), 六价铬(Cr(VI)) Hexavalent Chromium (Cr(VI))	IEC 62321-5:2013 Ed.1.0, IEC 62321-4:2013 Ed.1.0, IEC 62321-7-2:2017	ICP-OES, UV-Vis
多溴联苯(PBBs) Polybrominated Biphenyls (PBBs), 多溴二苯醚(PBDEs) Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	参考 IEC 62321-8 CDV Refer to IEC 62321-8 CDV	GC-MS
氟(F) Fluorine(F)	参考 EN 14582: 2016 Refer to EN 14582: 2016	IC
氯(Cl) Chlorine(Cl)	参考 EN 14582: 2016 Refer to EN 14582: 2016	IC
溴(Br) Bromine(Br)	参考 EN 14582: 2016 Refer to EN 14582: 2016	IC
碘(I) Iodine(I)	参考 EN 14582: 2016 Refer to EN 14582: 2016	IC
邻苯二甲酸酯 Phthalates (DIBP, BBP, DEHP, DNOP, DINP, DIDP, DNHP, DMEP, DBP, DPP)	参考 EN 14372:2004(E) Refer to EN 14372:2004(E)	GC-MS

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## 检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
铅(Pb) Lead (Pb)	N.D.	2mg/kg
镉(Cd)Cadmium (Cd)	N.D.	2mg/kg
汞(Hg)Mercury (Hg)	N.D.	2mg/kg
六价铬(Cr(VI)) Hexavalent Chromium (Cr(VI))	N.D.	8mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
<b>多溴联苯 Polybrominated Biphenyls(PBBs)</b>		
一溴联苯 Monobromodiphenyl	N.D.	5mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5mg/kg
<b>多溴二苯醚 Polybrominated Diphenyl Ethers(PBDEs)</b>		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5mg/kg
二溴二苯醚 Dibromobiphenyl ether	N.D.	5mg/kg
三溴二苯醚 Tribromobiphenyl ether	N.D.	5mg/kg
四溴二苯醚 Tetrabromobiphenyl ether	N.D.	5mg/kg
五溴二苯醚 Pentabromobiphenyl ether	N.D.	5mg/kg
六溴二苯醚 Hexabromobiphenyl ether	N.D.	5mg/kg
七溴二苯醚 Heptabromobiphenyl ether	N.D.	5mg/kg
八溴二苯醚 Octabromobiphenyl ether	N.D.	5mg/kg
九溴二苯醚 Nonabromobiphenyl ether	N.D.	5mg/kg
十溴二苯醚 Decabromobiphenyl ether	N.D.	5mg/kg

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测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
<b>邻苯二甲酸酯 Phthalates</b>		
邻苯二甲酸二正丁酯(DBP) Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
邻苯二甲酸丁基苄酯(BBP) Benzylbutyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
邻苯二甲酸二(2-乙基己基)酯(DEHP) Di-2-ethylhexyl phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
邻苯二甲酸二异丁酯(DIBP) Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
<b>卤素 Halogen</b>		
氟(F) Fluorine (F)	560 mg/kg	10mg/kg
氯(Cl) Chlorine (Cl)	248 mg/kg	10mg/kg
溴(Br) Bromine (Br)	N.D.	10mg/kg
碘(I) Iodine (I)	N.D.	10mg/kg

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测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
<b>邻苯二甲酸酯 Phthalates</b>		
邻苯二甲酸二正丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50mg/kg
邻苯二甲酸丁基苄酯 Benzylbutyl phthalate (BBP) CAS#:85-68-7	N.D.	50mg/kg
邻苯二甲酸二(2-乙基己基)酯 Bis(2-ethyl(hexyl)) phthalate (DEHP) CAS#:117-81-7	N.D.	50mg/kg
邻苯二甲酸二异壬酯 Diisononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	50mg/kg
邻苯二甲酸二正辛酯 Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	50mg/kg
邻苯二甲酸二异癸酯 Diisodecyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50mg/kg
邻苯二甲酸二戊酯 Dipentyl phthalate (DPP) CAS#:131-18-0	N.D.	50mg/kg
邻苯二甲酸二己酯 Di-n-hexyl phthalate (DNHP) CAS#: 84-75-3	N.D.	50mg/kg
邻苯二甲酸二甲氧基乙酯 Dimethoxyethyl phthalate (DMEP) CAS#: 117-82-8	N.D.	50mg/kg

测试样品/部位描述 电子元器件(整体测试)  
Tested Sample/Part Description Electronic components (Tested as a whole)

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备注: 对于检测铅, 镉, 汞之样品已完全溶解。

按照目前手段, 样品无法进一步拆分, 样品整体测试, 测试结果不代表整体测试样品中任何一种单一材质的含量。

-N.D. = 未检出 (小于方法检出限)

-mg/kg = ppm = 百万分之一

**Remark: The sample had been dissolved totally tested for Lead, Cadmium, Mercury.**

**The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

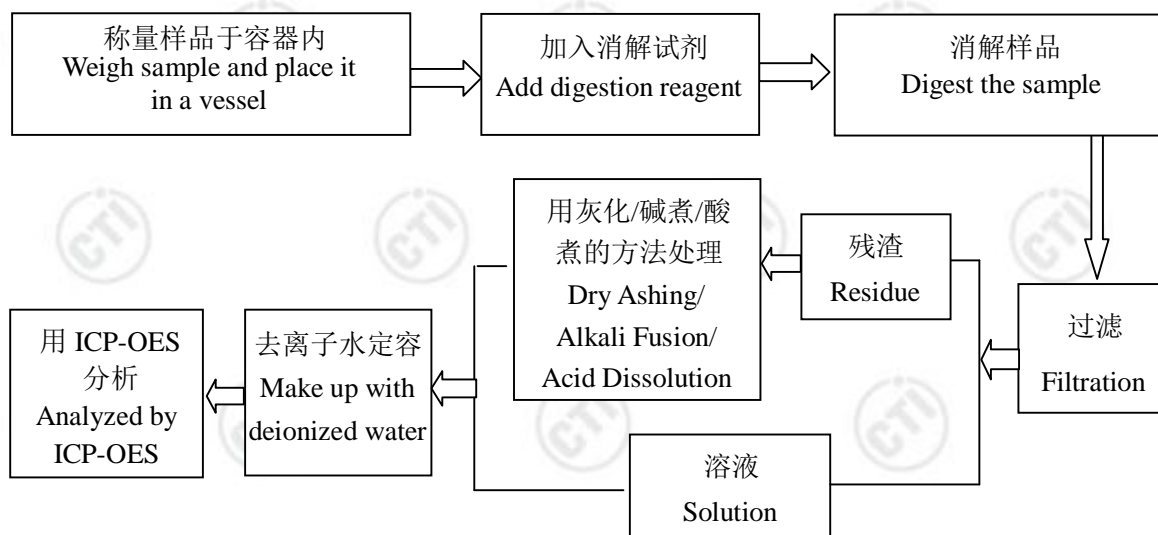
-mg/kg = ppm = parts per million

注释: 本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

**Note:** The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

## 检测流程 Test Process

### 1. 铅(Pb), 镉(Cd), 铬(Cr) Lead(Pb), Cadmium(Cd), Chromium(Cr)

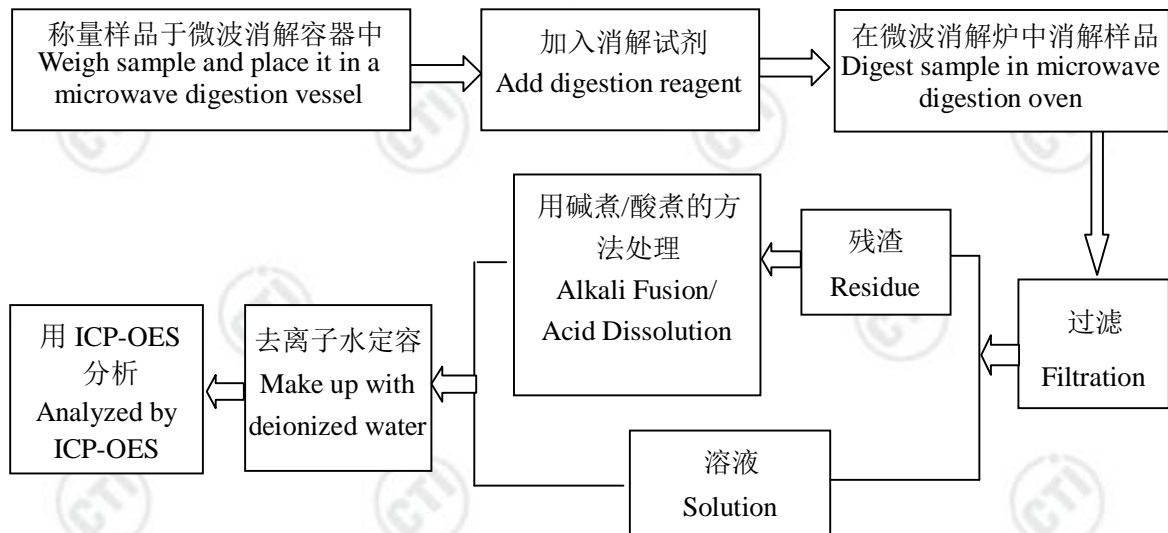


# 检测报告 Test Report

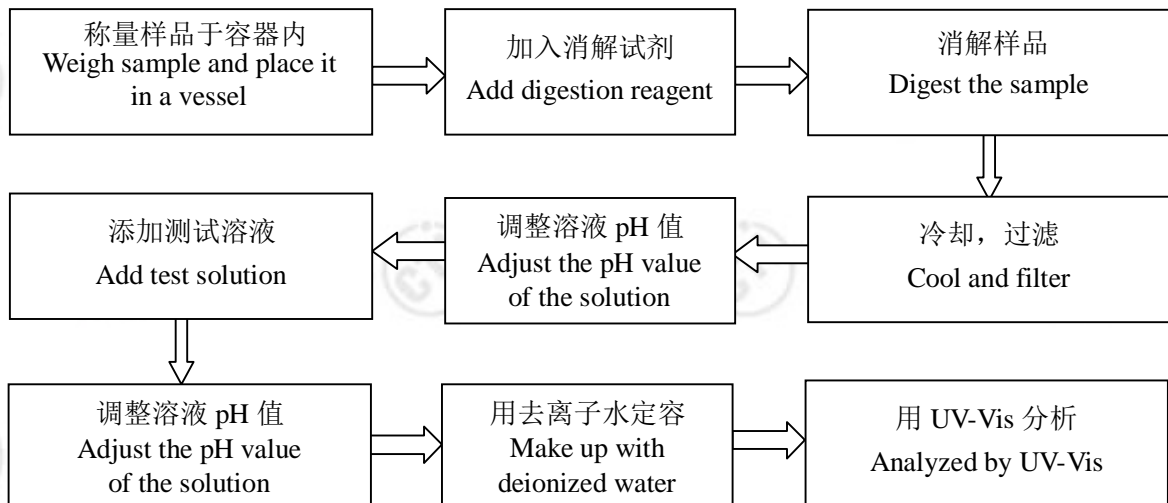
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## 2. 汞(Hg) Mercury (Hg)



## 3. 六价铬(Cr(VI)) Hexavalent Chromium (Cr(VI))



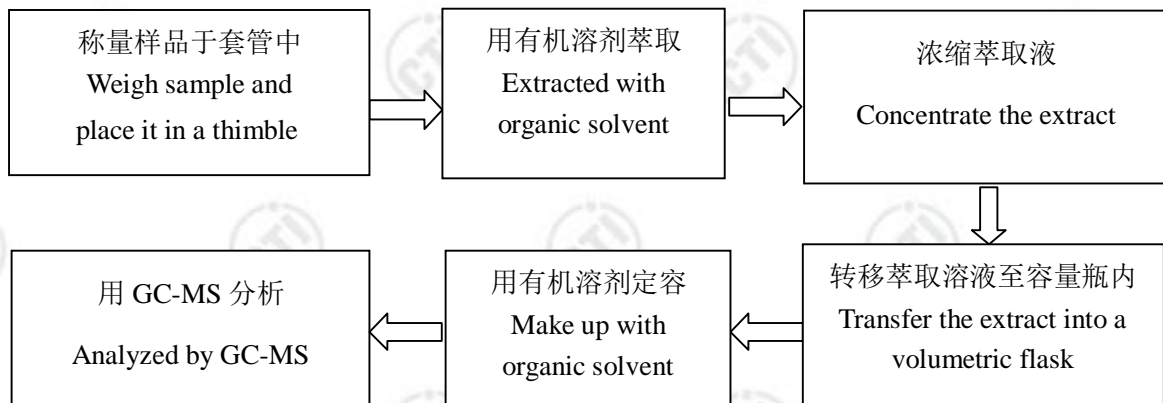
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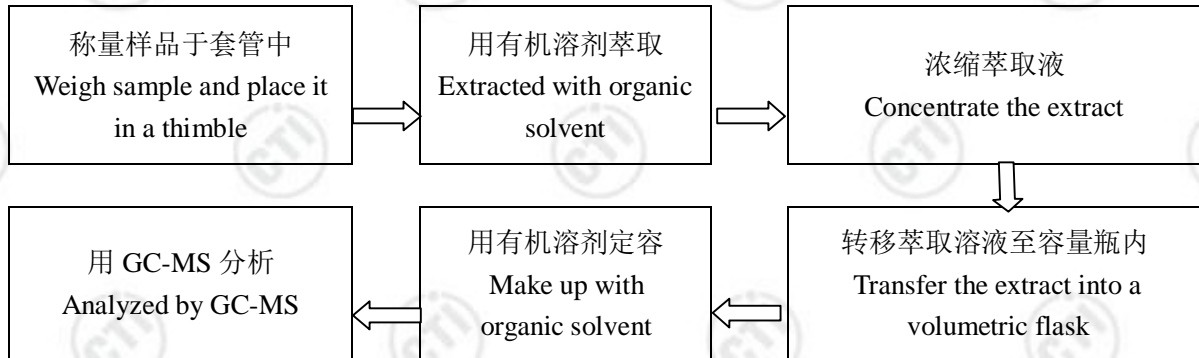
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## 4. 多溴联苯(PBBs), 多溴二苯醚(PBDEs)

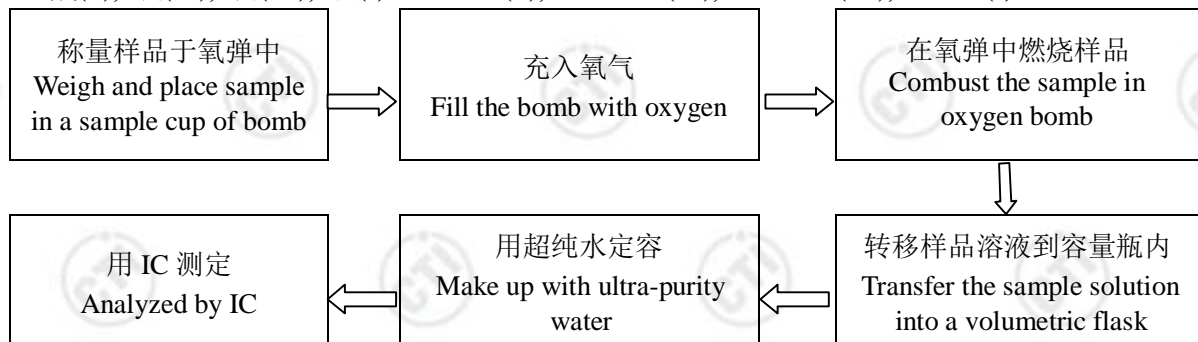
Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



## 5. 邻苯二甲酸酯 Phthalates



## 6. 氟(F), 氯(Cl), 溴(Br), 碘(I) Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I)





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## 样品图片 Photo(s) of the sample(s)



\*\*\* 报告结束 \*\*\*

\*\*\*End of report \*\*\*

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