



检测报告

Test Report

报告编号 A225038452610101E
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报告抬头公司名称 温州港源电子有限公司
Company Name WENZHOU GANGYUAN ELECTRONICS CO., LTD
shown on Report
地 址 浙江省乐清市城东街道永和一路 2 号
Address NO. 2, YONGHE 1ST ROAD, CHENGDONG STREET, YUEQING CITY, ZHEJIANG PROVINCE

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 applicant

样品名称 TACT SWITCH
Sample Name(s) TACT SWITCH
样品接收日期 2025.06.12
Sample Received Date Jun. 12, 2025
样品检测日期 2025.06.12-2025.06.20
Testing Period Jun. 12, 2025 to Jun. 20, 2025

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。

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 (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

检测依据/检测结果 请参见下页。

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

批 准

Approved by

袁辉龙

日 期

Date

2025.06.20

袁辉龙

授权签字人 Lab Authorized Signatory

No. R465024383

宁波高新区菁华路 76 号厂区东首第一、二层

宁波市华测检测技术有限公司

Centre Testing International (Ningbo) Co., Ltd.

1-2F, Eastern Factory, No.76, Jinghua Road, High-Tech Zone, Ningbo, Zhejiang, China

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结论 Conclusion

测试样品 Tested Sample	依据标准/指令 According to standard/directive	结果 Result
提交样品 Submitted Sample	欧盟 RoHS 指令 2011/65/EU 及其修订指令 (EU) 2015/863 RoHS Directive 2011/65/EU with amendment (EU) 2015/863	符合 PASS

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。

PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

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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 applicant

CTI 样品 ID CTI Sample ID	引用报告编号- CTI 样品 ID Reference Report No. - CTI Sample ID
4	A2250384526101E-1

备注:

上表格涉及到引用数据的样品本次未测试。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。

Remark:

The samples with the reference information in the table above are non-tested in this report. According to the client's statement, the material of the samples in the column "Reference Report No. - CTI Sample ID " in the table above are the same as the " CTI Sample ID ".

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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 Lead (Pb)	IEC 62321-5:2013	ICP-OES
	参考 IEC 62321-5:2013 Refer to IEC 62321-5:2013	
镉 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
	参考 IEC 62321-5:2013 Refer to IEC 62321-5:2013	
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
	参考 IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
	IEC 62321-7-2:2017 和/或 IEC 62321-5:2013 测试总 铬含量 IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
多溴联苯 Polybrominated Biphenyls(PBBs)	IEC 62321-12:2023	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-12:2023	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-12:2023	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	限值 Limit
	1	2	3.1		
铅 Lead (Pb)	7 mg/kg	N.D.	N.D.	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D.	--	--	8 mg/kg	1000 mg/kg
	--	N.D.▼	N.D.▼	0.10 µg/cm ² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result		方法检出限 MDL	限值 Limit
	3.2	5		
铅 Lead (Pb)	38 mg/kg	60 mg/kg	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	--	--	8 mg/kg	1000 mg/kg
	N.D.▼	N.D.▼	0.10 µg/cm ² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	1		
多溴联苯 Polybrominated Biphenyls(PBBs)			
一溴联苯 Monobromobiphenyl	N.D.	25 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	25 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	25 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	25 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	25 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	25 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	25 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	25 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	25 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	25 mg/kg	

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测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	1		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)			
一溴二苯醚 Monobromodiphenyl ether	N.D.	25 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	25 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	25 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	25 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	25 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	25 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	25 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	25 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	25 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	25 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	1		
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)			
邻苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

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样品/部位描述 Sample/Part Description

序号	CTI 样品 ID	描述
No.	CTI Sample ID	Description
1	1	黑色塑料 Black plastic
2	2	银色金属 Silvery metal
3	3.1	银色镀层 Silvery plating
4	3.2	金属基材 Metal base
5	5	银色金属引脚 Silvery metal pin

备注: 对于检测铅, 镉, 汞之样品已消解完全。

-N.D. = 未检出 (小于方法检出限或定量限)

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

-LOQ = 定量限, 六价铬的定量限为 0.10 $\mu\text{g}/\text{cm}^2$

-▼六价铬浓度小于 0.10 $\mu\text{g}/\text{cm}^2$, 样品未检出六价铬。由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

-本报告的测试结果引用自于报告 A2250384526101E.

Remark: The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 $\mu\text{g}/\text{cm}^2$

-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 $\mu\text{g}/\text{cm}^2$. The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

- The test result (s) is presented in reference to the result (s) that reported in A2250384526101E.

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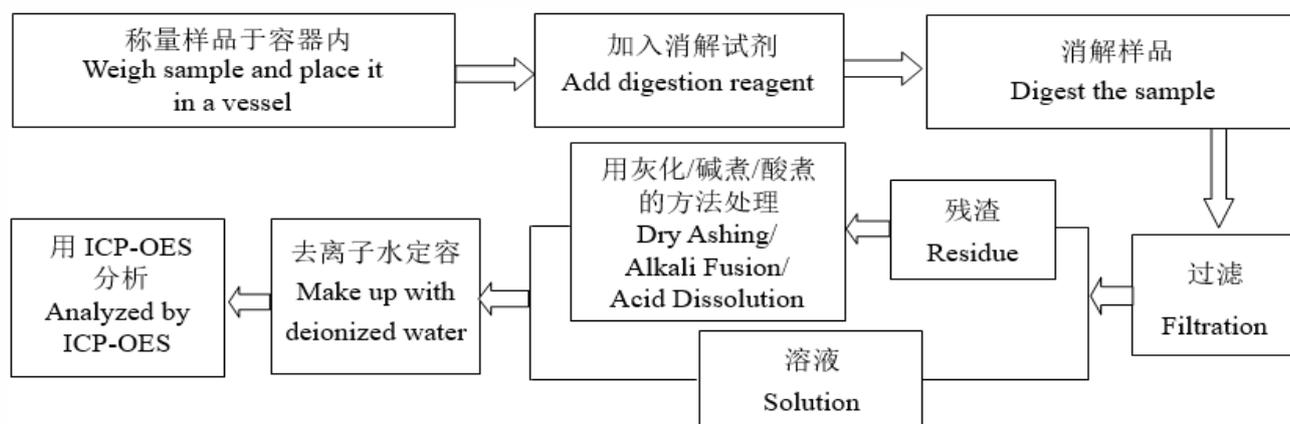
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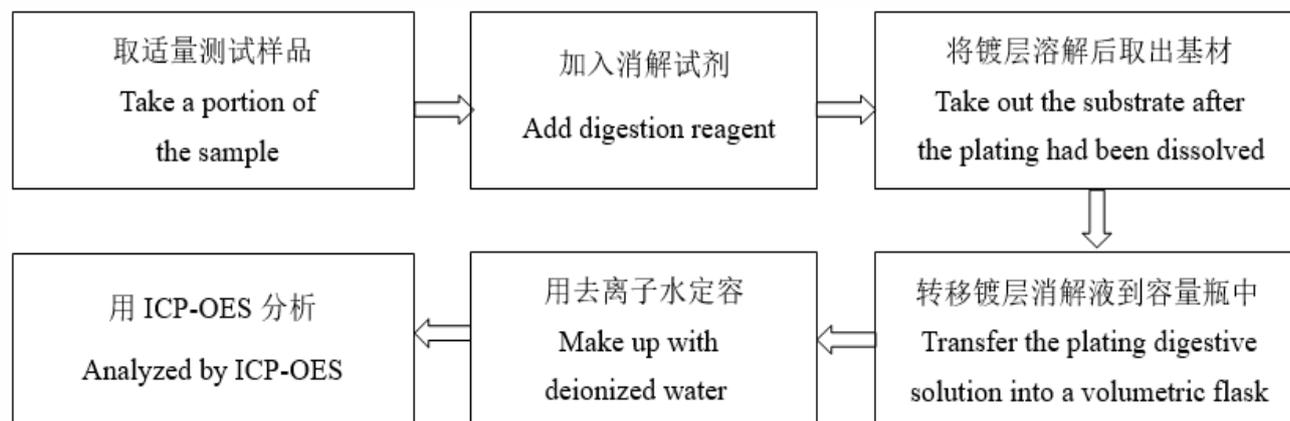
检测流程 Test Process

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

(1) IEC 62321-5:2013



(2) 参考 IEC 62321-5:2013 Refer to IEC 62321-5:2013



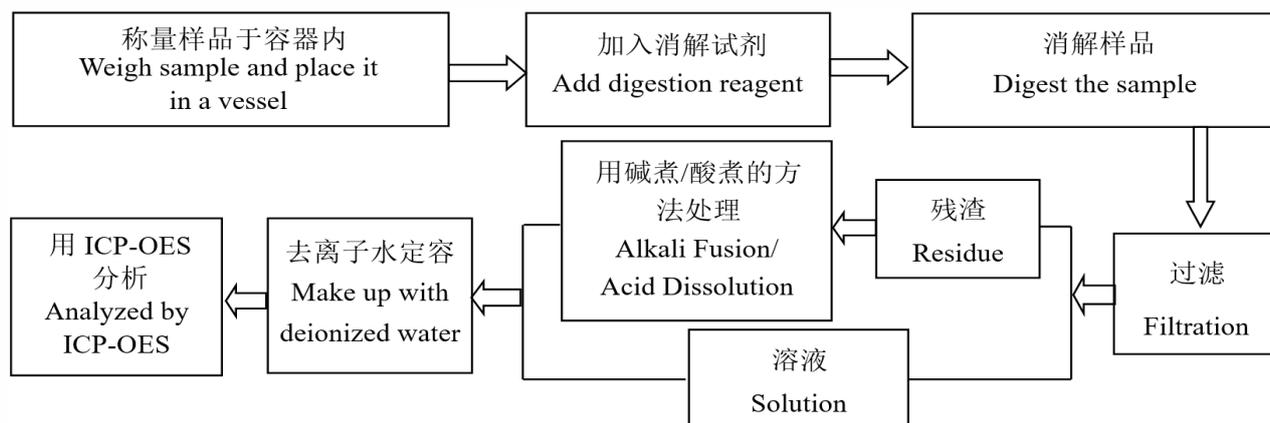
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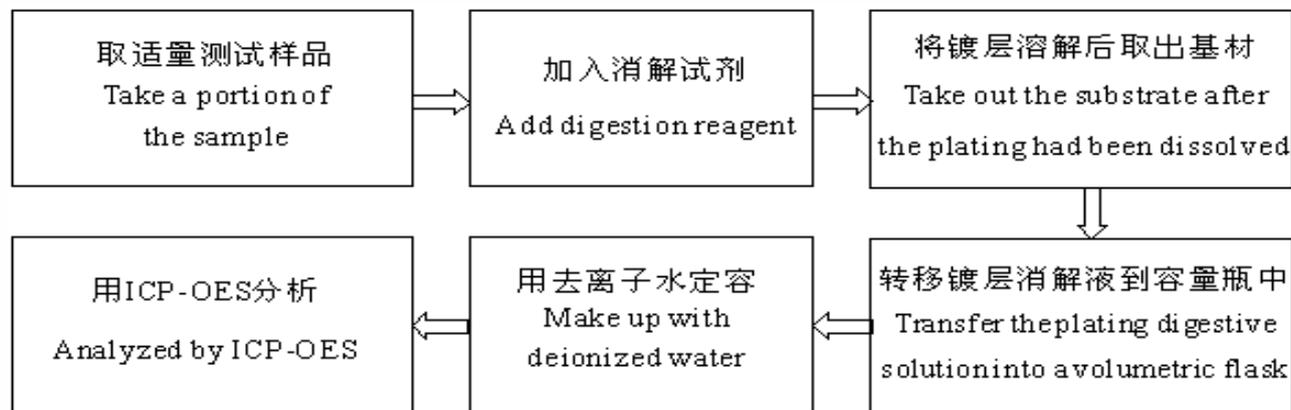
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2. 汞 Mercury (Hg)

(1) IEC 62321-4:2013+AMD1:2017 CSV

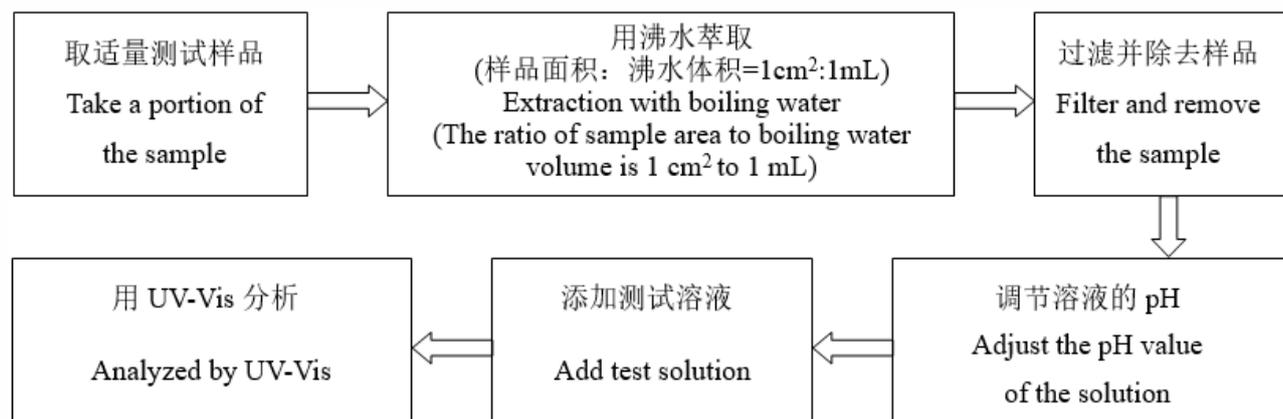


(2) 参考 IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV



3. 六价铬 Hexavalent Chromium (Cr(VI))

(1) IEC 62321-7-1:2015

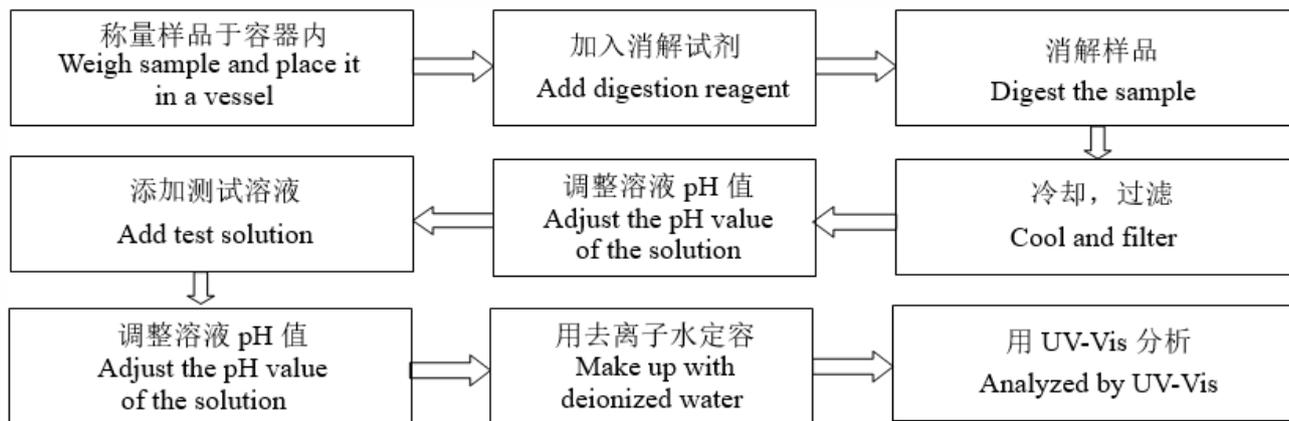


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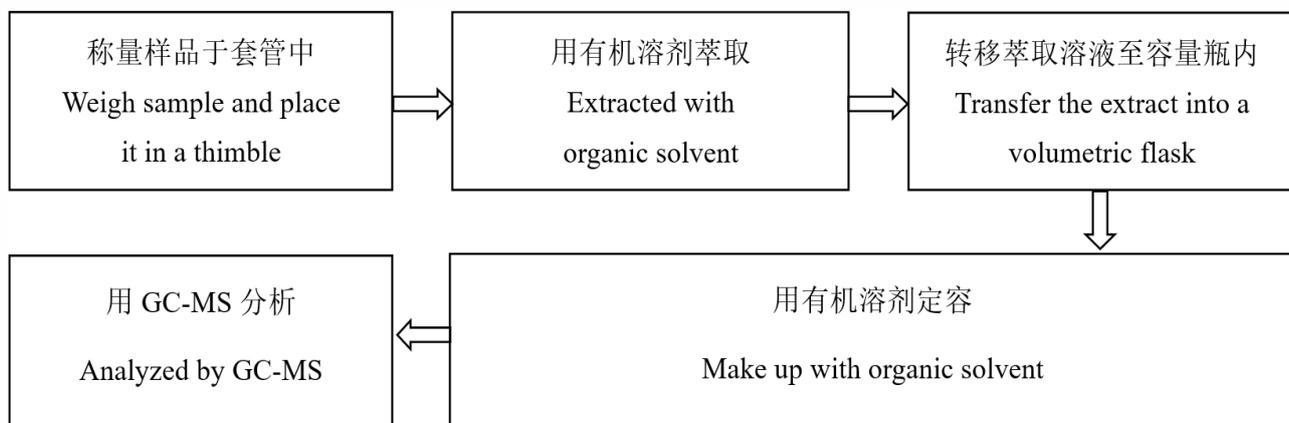
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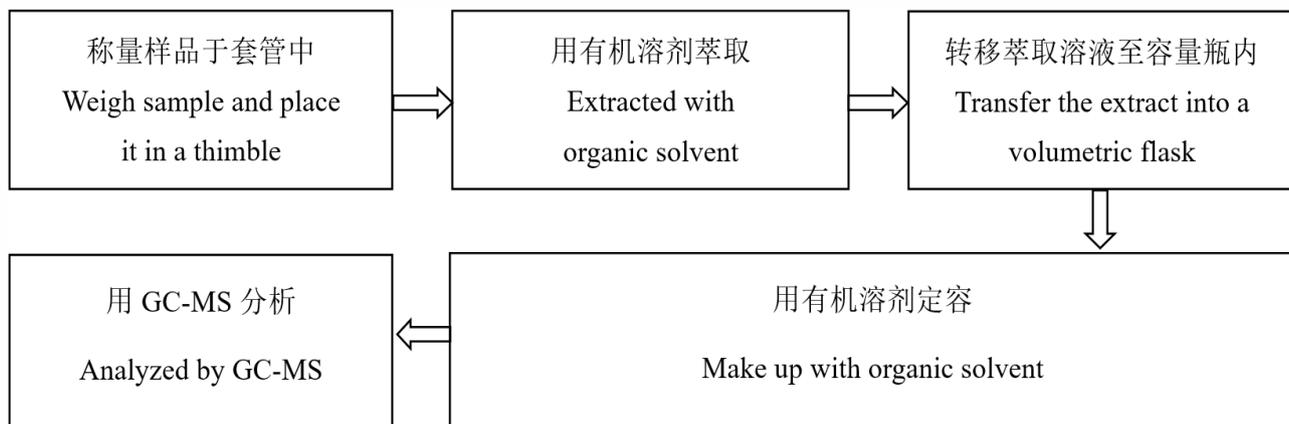
(2) IEC 62321-7-2:2017



4. 多溴联苯 Polybrominated Biphenyls(PBBs), 多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)



5. 邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)



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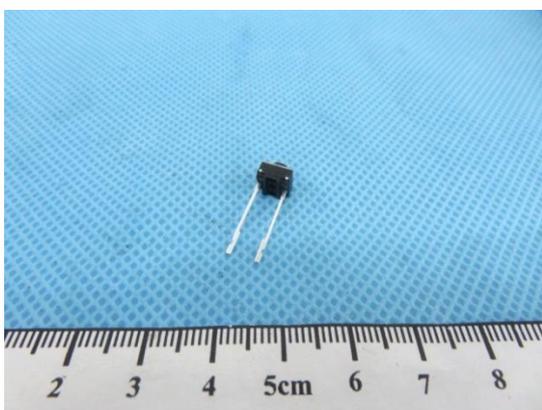
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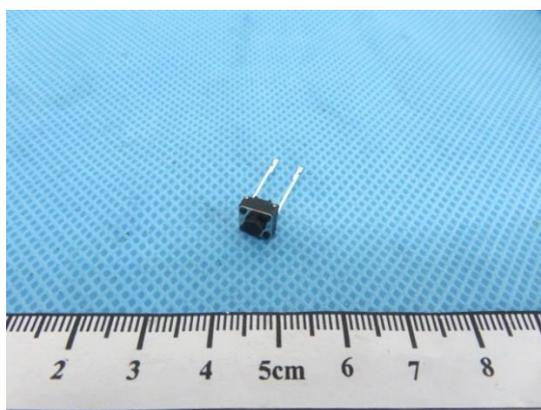
样品图片

Photo(s) of the sample(s)

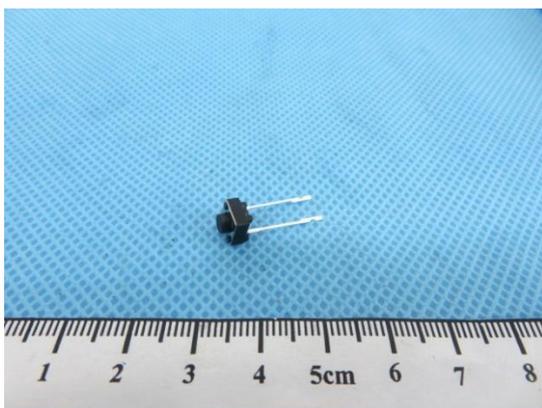
成品 Final Product



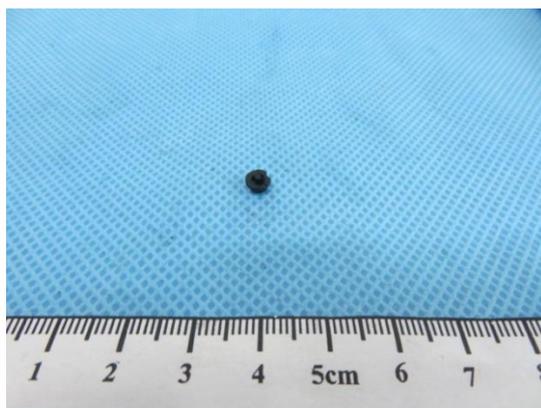
成品 Final Product



成品 Final Product



1

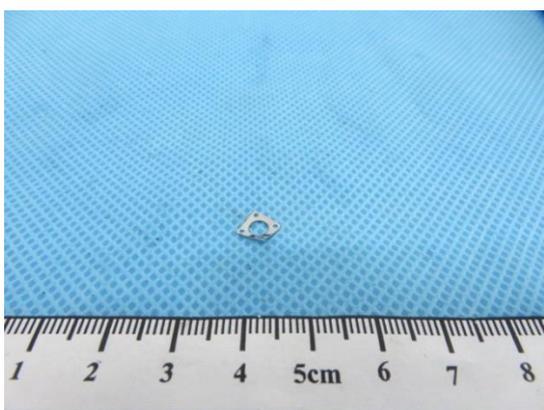


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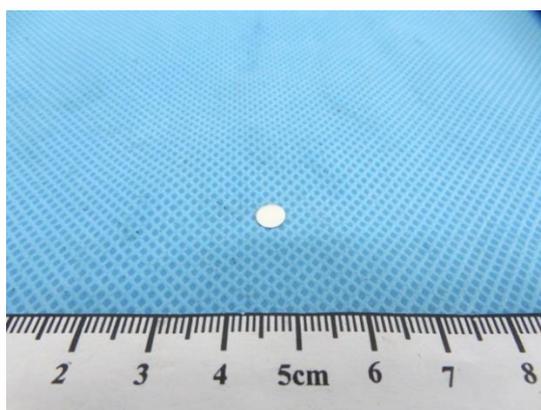
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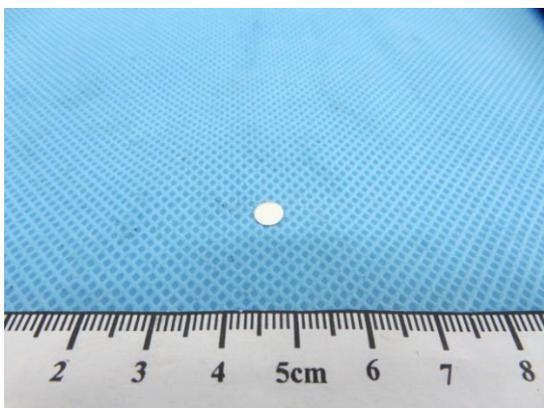
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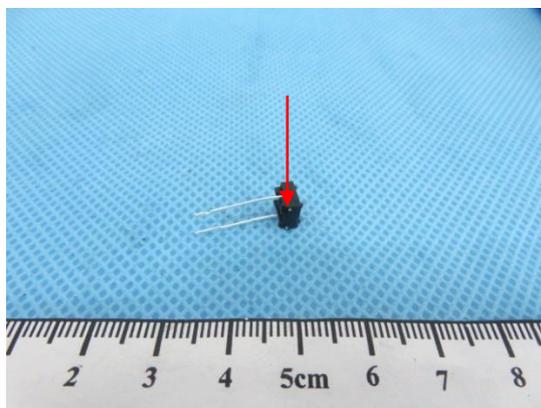
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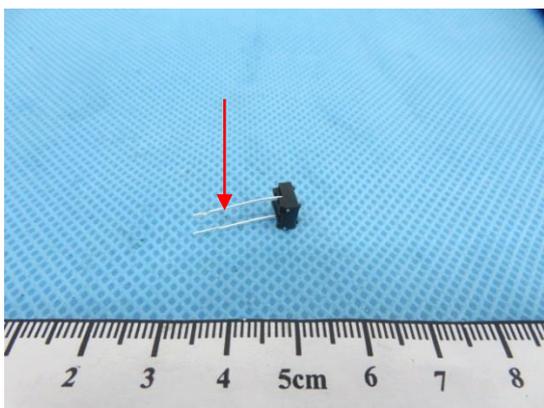
3.2



4 (客户参考图片 (非测试样品))
(Client Reference Photo (Non-tested sample))



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声明 Statement:

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效;

This report is considered invalid without approved signature, special seal and the seal on the perforation;

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;

The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;

3. 本报告检测结果仅对受测样品负责;

The result(s) shown in this report refer(s) only to the sample(s) tested;

4. 除非另有说明, 报告参照 ILAC-G8:09/2019 / CNAS-GL015:2022 使用简单接受 (w=0) 二元判定规则进行符合性判定;

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;

5. 未经 CTI 书面同意, 不得部分复制本报告;

Without written approval of CTI, this report can't be reproduced except in full;

6. 如检测报告中的英文内容与中文内容有差异, 以中文为准。

In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

*** 报告结束 ***

*** End of Report ***

附录 Appendix

客户参考信息 Client Reference Information

KAN,KSH, GS, KSMC,KSS,KAM,KSHC,KFC,KTD,KFD,MS KS,KBM,KSGC, PS, PB,SS, SK, MK,MSS, MSK,MC,DC, GDS,KW,RS,BM,DPA,DSG,PJ,MS15A,KTD,RSF,RSC,RSH

声明 Statement:

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。
The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. 附录内容为 A225038452610101E 报告的补充。
The Appendix Information is/are the supplement(s) for the Report A225038452610101E.

