

# 检测报告

## TEST REPORT

报告编号: BCTC2408843517R

Report No.:

委托单位: 深圳市星科创科技有限公司

Applicant:

产品名称: 非接触液位传感器

Product Name:

产品型号: XKC-Y25-V

Product Type:

检测日期: 2024-08-01 至 2024-08-08

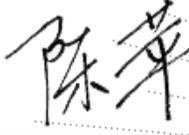
Tested Date:

签发日期: 2024-08-12

Issued Date:

深圳市倍测检测有限公司  
Shenzhen BCTC Testing Co., Ltd.



产品名称 Product Name	非接触液位传感器 Non-contact level sensor
产品型号 Product Type	XKC-Y25-V
附加型号 Additional Type	XKC-Y25-NPN 24V, XKC-Y25-NPN 5-12V, XKC-Y25-PNP 5-12V, XKC-Y25-PNP 24V, XKC-Y25-T12V, XKC-Y25-RS485, XKC-Y25-UART, XKC-Y25-V-S, XKC-Y25-NPN-S
委托单位 Applicant	深圳市星科创科技有限公司 ShenzhenXingKeChuang Technology Co., Ltd.
委托单位地址 Address	广东省深圳市宝安区新桥街道新桥社区新玉路48号十一层 11th Floor, No. 48, Xinyu Road, Xinqiao Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong Province.
制造商 Manufacturer	深圳市星科创科技有限公司 ShenzhenXingKeChuang Technology Co., Ltd.
制造商地址 Address	广东省深圳市宝安区新桥街道新桥社区新玉路48号十一层 11th Floor, No. 48, Xinyu Road, Xinqiao Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong Province.
商标 Trademark	
接收日期 Sample Received Date	2024-08-01
检测类别 Test Type	委托检测 Entrustment Test
检测方法 Test Method	请参见下页。 Please refer to the following page(s).
检测要求 Test Requested	请参见下页。 Please refer to the following page(s).
检测依据 Test Standard	RoHS指令2011/65/EU以及修订指令(EU)2015/863 RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863
检测结果 Test Result	根据委托要求和检测依据对样品进行检测，试验样品所检项目合格。 The samples were tested according to the entrusted requirements and test standard, and the test items of the test samples were qualified.
编制 Prepared by:	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">                       李婷                 </div> <div style="text-align: center;">                     审核                      Reviewed by:                 </div> <div style="text-align: center;">                       陈苹                 </div> <div style="text-align: center;">                     批准                      Approved by:                 </div> <div style="text-align: center;">                       陈汉耀                 </div> </div>



检测要求  
Test Requested

1. 根据客户要求，用XRF对所提交样品中的铅(Pb)、镉(Cd)、汞(Hg)、铬(Cr)和溴(Br)进行筛选测试。

As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.

2. 根据客户要求，当筛选结果超出IEC 62321-3-1:2013的XRF筛选限值时，进一步采用化学方法对所提交样品中的铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr(VI))、多溴联苯(PBBs)和多溴二苯醚(PBDEs)进行测试。

As specified by client, when screening results exceed the XRF screening limit in IEC 62321-3-1:2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted sample(s).

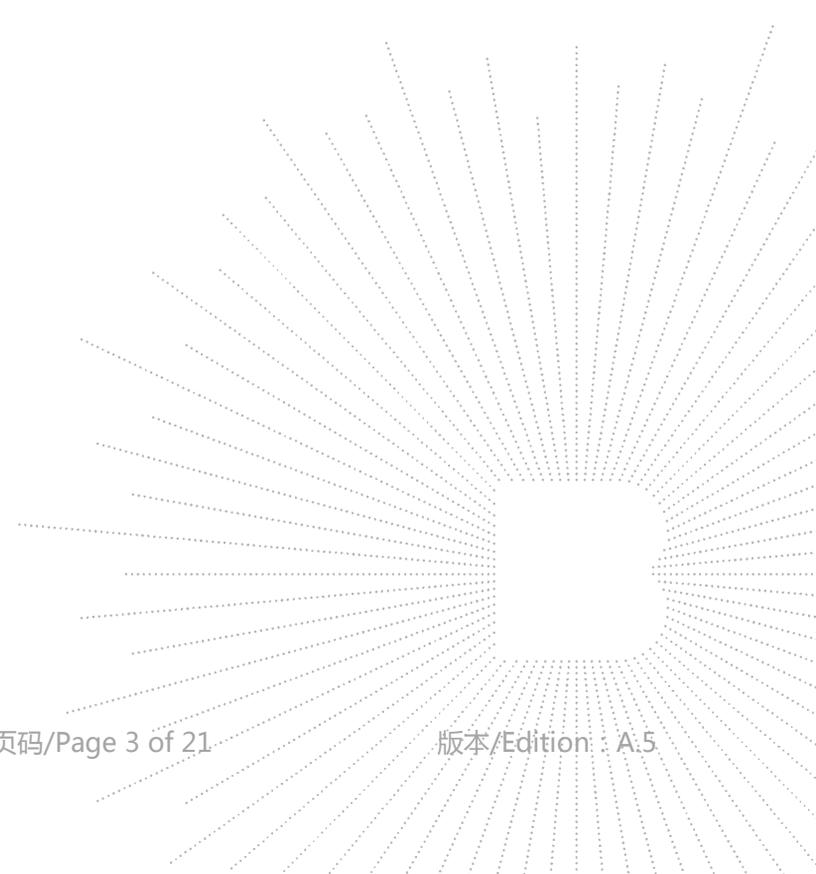
3. 根据客户要求，对所提交样品中的邻苯二甲酸二异丁酯(DIBP)，邻苯二甲酸二丁酯(DBP)，邻苯二甲酸丁苯酯(BBP)，邻苯二甲酸二(2-乙基己基)酯(DEHP)进行测试。

As specified by client, to test the Diisobutyl phthalate(DIBP), Dibutyl phthalate(DBP), Butyl benzyl phthalate(BBP), Bis(2-ethylhexyl) phthalate(DEHP) in the submitted sample(s).

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**检测方法 Test Method:**
**A. IEC 62321-3-1:2013 对管控元素的 XRF 筛选限值 XRF Screening limits for regulated elements according to IEC 62321-3-1:2013**

测试元素 Element	IEC 62321-3-1:2013 的筛选限值 Screening limits of IEC 62321-3-1:2013 单位 Unit (mg/kg)		
	聚合物 Polymers	金属 Metals	复合材料 Composite material
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$

**B. 邻苯二甲酸酯的筛选限值 Screening limits for Phthalates**

测试项目 Test Item(s)	筛选限值 Screening limits 单位 Unit (mg/kg)
邻苯二甲酸二异丁酯 Diisobutyl phthalate(DIBP)	$BL \leq 600 < X$
邻苯二甲酸二丁酯 Dibutyl phthalate(DBP)	$BL \leq 600 < X$
邻苯二甲酸丁苄酯 Butyl benzyl phthalate(BBP)	$BL \leq 600 < X$
邻苯二甲酸二(2-乙基己基)酯 Bis(2-ethylhexyl) phthalate(DEHP)	$BL \leq 600 < X$

**注释Note:**

-BL=低于筛选限值=Under the screening limit

-OL=高于筛选限值, 需进一步化学测试确认=Further chemical test will be conducted while result is above the screening limit

-X=此范围内的样品需要进一步化学测试确认=The symbol "X" marks the region where further investigation is necessary

-3σ=表明分析仪器的重现性=The reproducibility of analytical instruments

-LOD=检出限=Detection limit

-"-" =未规定=Not regulated.

**C. 化学测试 Chemical Test**

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)	方法检 测限 MDL	限值 Limit
铅 Lead(Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
镉 Cadmium(Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	100 mg/kg
汞 Mercury(Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium(Cr(VI))	IEC 62321-7-1:2015 Ed.1.0	UV-VIS	--	1000 mg/kg
	IEC 62321-7-2:2017 Ed.1.0		8 mg/kg	1000 mg/kg
多溴联苯 Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS/ HPLC-UV	100 mg/kg	1000 mg/kg
多溴二苯醚 Polybrominated Diphenyl Ethers(PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS/ HPLC-UV	100 mg/kg	1000 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate(DIBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
邻苯二甲酸二丁酯 Dibutyl phthalate(DBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
邻苯二甲酸丁苄酯 Butyl benzyl phthalate(BBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基己基)酯 Bis(2-ethylhexyl) phthalate(DEHP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg



**检测结果 Test Result(s):**

样品编号 Sample No.	样品描述 Sample Description	测试项目 Test Item(s)	XRF 扫描结果 XRF Screening Test 单位 Unit (mg/kg)	邻苯二甲酸酯筛选结果 Phthalates Screening Test 单位 Unit (mg/kg)	化学测试结果 Chemical Test 单位 Unit (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/ Resubmitted Date
1	白色塑料 White plastic	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
2	黑色热缩管 Black heat shrink tube	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
3	黑色外线皮 Black outside wire jacket	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		H	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
4	黑色线皮 Black wire jacket	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		

样品编号 Sample No.	样品描述 Sample Description	测试项目 Test Item(s)	XRF 扫描结果 XRF Screening Test 单位 Unit (mg/kg)	邻苯二甲酸酯筛选结果 Phthalates Screening Test 单位 Unit (mg/kg)	化学测试结果 Chemical Test 单位 Unit (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/ Resubmitted Date
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
		DEHP	/	/	N.D.		
5	蓝色线皮 Blue wire jacket	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
		DEHP	/	/	61		
6	黄色线皮 Yellow wire jacket	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
		DEHP	/	/	N.D.		
7	棕色线皮 Brown wire jacket	/	BL	/	/	合格 PASS	2024-08-02
		/	BL	/	/		
		/	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
		DEHP	/	/	N.D.		
8	白色塑料 White plastic	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		

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		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
		DEHP	/	/	N.D.		
9	银白色标签 Silver white label	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		
DEHP	/	/	/				
10	金色金属 Gold metal	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	/	/	/		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		
DEHP	/	/	/				
11	绿色 PCB 板 Green PCB	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	11101	/	N.D.		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
DEHP	/	/	N.D.				
12		Pb	BL	/	/		2024-08-02

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	焊锡 Tin solder	Cd	BL	/	/	合格 PASS	
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	/	/	/		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		
		DEHP	/	/	/		
13	白色胶 White glue	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	N.D.		
		DBP	/	/	N.D.		
		BBP	/	/	N.D.		
DEHP	/	/	N.D.				
14	红色 LED Red LED	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	1193	/	N.D.		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		
DEHP	/	/	/				
15	蓝色塑料 Blue plastic	Pb	BL	/	/	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		

样品编号 Sample No.	样品描述 Sample Description	测试项目 Test Item(s)	XRF 扫描结果 XRF Screening Test 单位 Unit (mg/kg)	邻苯二甲酸酯筛选结果 Phthalates Screening Test 单位 Unit (mg/kg)	化学测试结果 Chemical Test 单位 Unit (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/ Resubmitted Date
		DEHP	/	/	/		
16	银色金属 Silver metal	Pb	10355	/	26813#	合格 PASS	2024-08-02
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	/	/	/		
		DIBP	/	/	/		
		DBP	/	/	/		
		BBP	/	/	/		
		DEHP	/	/	/		

**注释 Note:**

-N.D. =未检出 (小于方法检测限)= Not Detected (<MDL)

-mg/kg =百万分之几= ppm = parts per million

-“/” =未进行= Not conducted.

-当六价铬的浓度小于 $0.10\mu\text{g}/\text{cm}^2$ 时, 样品为阴性, 即未检出六价铬。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.

-当六价铬的浓度大于 $0.13\mu\text{g}/\text{cm}^2$ 时, 样品为阳性, 即检出六价铬。The sample is positive for Cr(VI) – The Cr(VI) concentration is above  $0.13\mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain Cr(VI).

-当六价铬的浓度介于 $0.10\mu\text{g}/\text{cm}^2$ 与 $0.13\mu\text{g}/\text{cm}^2$ 之间时, 无法确定是否检出六价铬。不可避免因样品的不一致性导致测试的不确定性。The result is considered to be inconclusive -The Cr(VI) concentration is between the  $0.10\mu\text{g}/\text{cm}^2$  and  $0.13\mu\text{g}/\text{cm}^2$ . Unavoidable coating variations may influence the determination.

-#=根据指令 (2011/65 / EU) 附件III的豁免条款6(c), 铜合金中的铅含量不超过4%是被豁免的。

-#=According to the exemption clause 6(c) in annex III of directive (2011/65/EU), Lead is exempted as copper alloy containing up to 4% lead by weight.

**备注 Remark:**

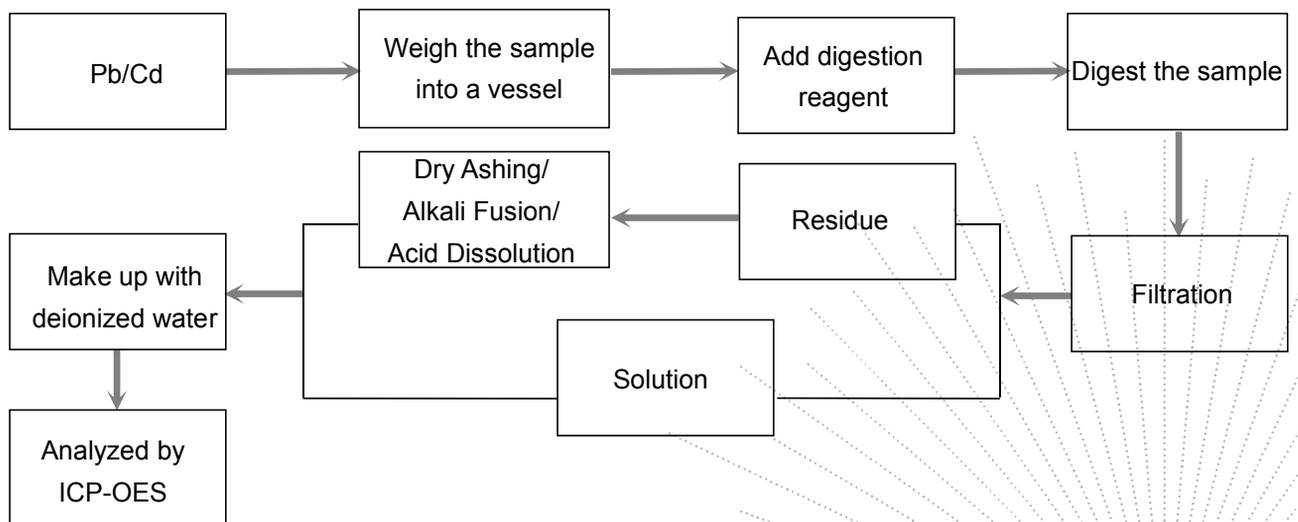
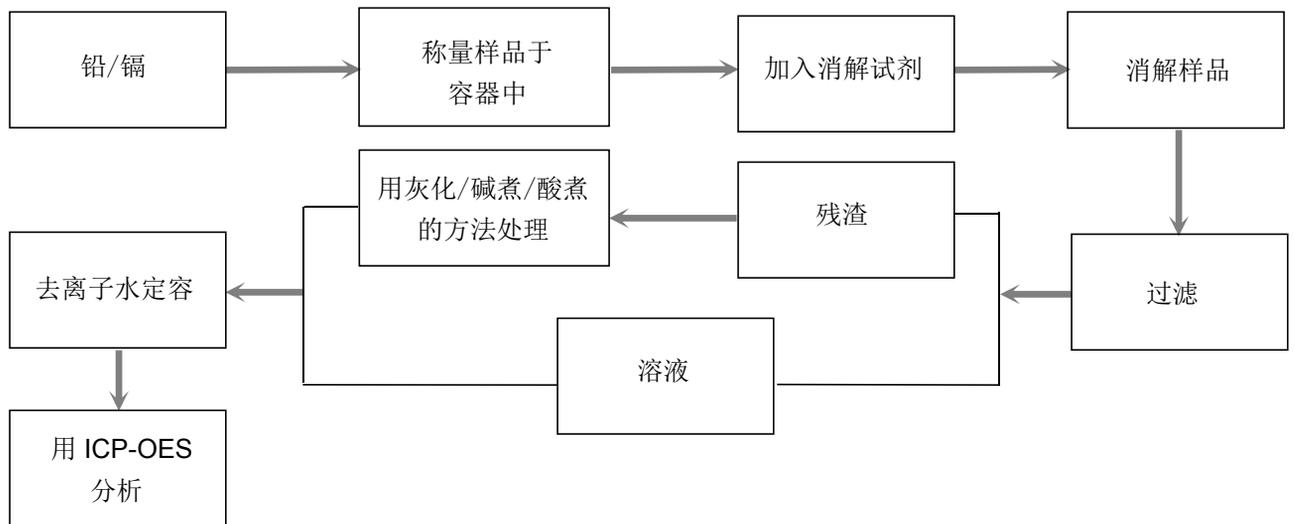
-XRF 扫描分析结果仅供参考。The screening results are only used for reference.

-对于六价铬, XRF 筛选时其结果显示的是总铬含量; 对于多溴联苯(PBBs)和多溴二苯醚(PBDEs), XRF 筛选时其结果显示的是总溴含量。When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively; When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively.

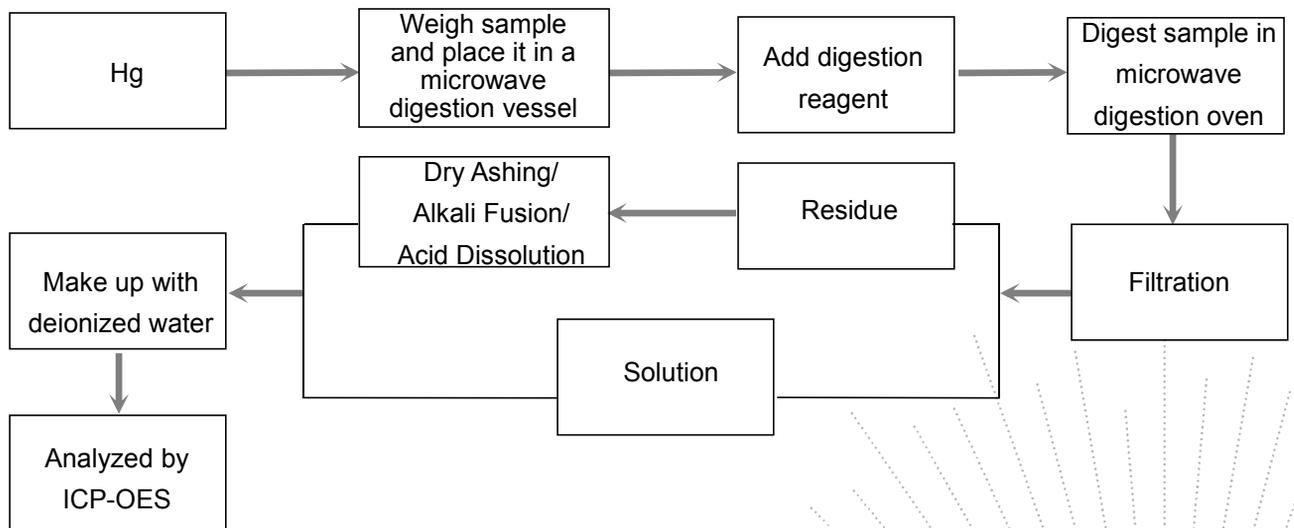
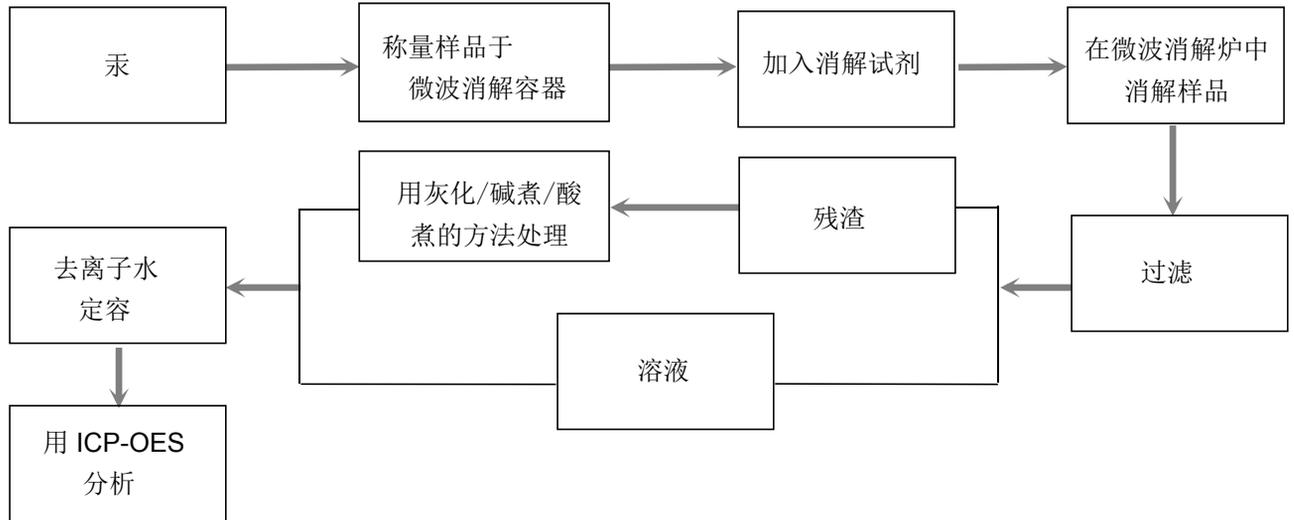
**检测流程 Test Process:**

对于检测铅, 镉, 汞之样品已完全溶解。The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

◆ IEC 62321-5:2013 Ed.1.0

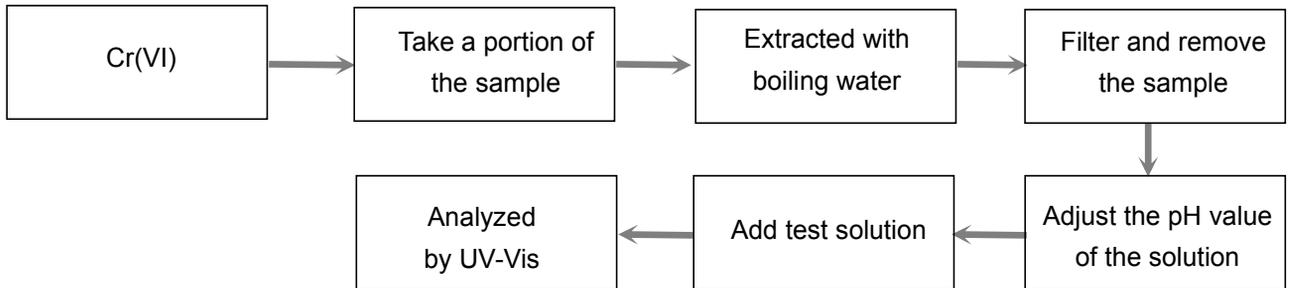
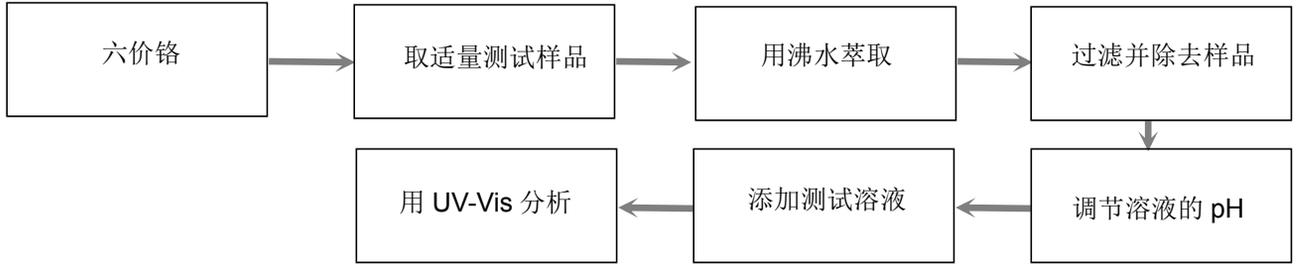


◆ IEC 62321-4:2013+AMD1:2017

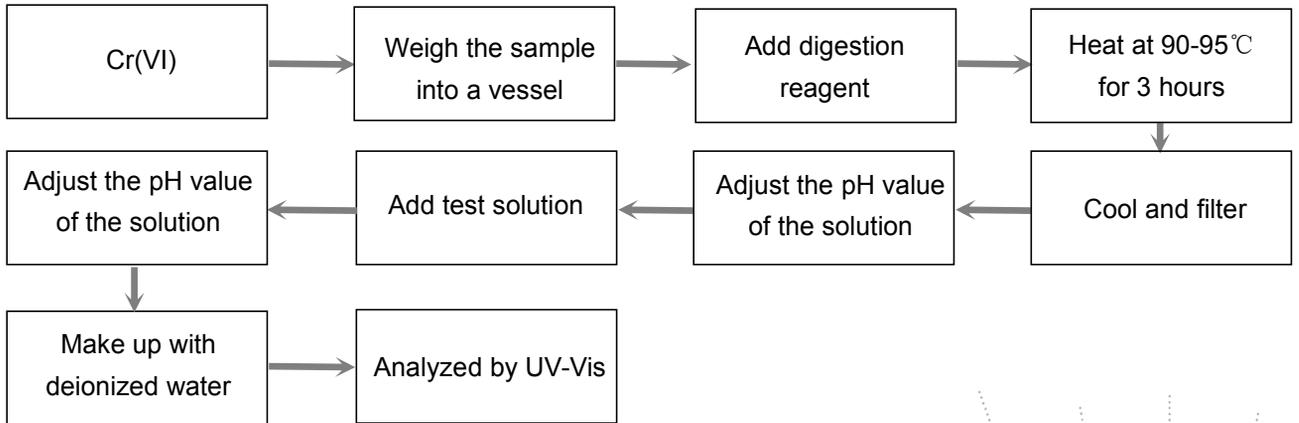
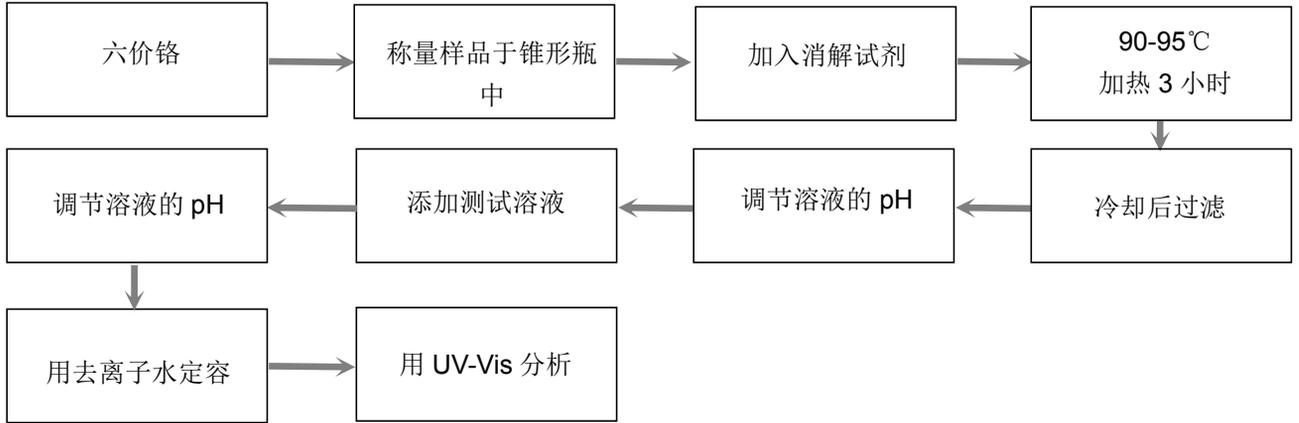


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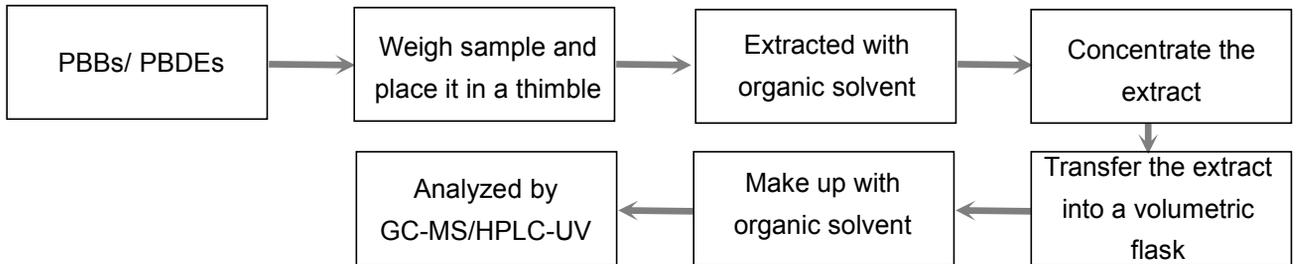
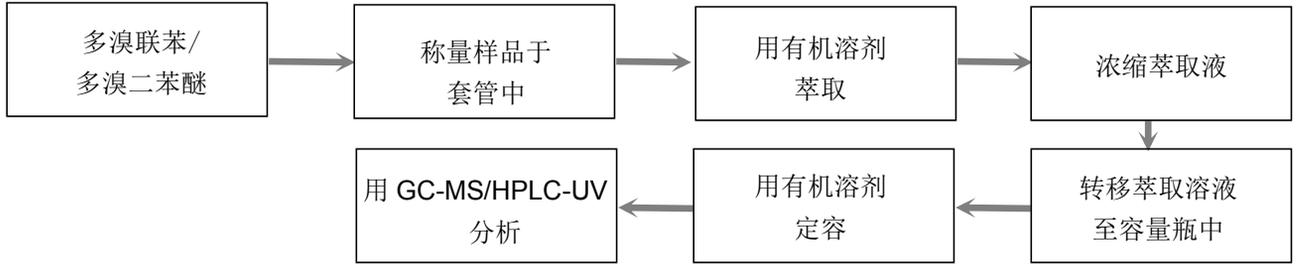
◆ IEC 62321-7-1:2015 Ed.1.0



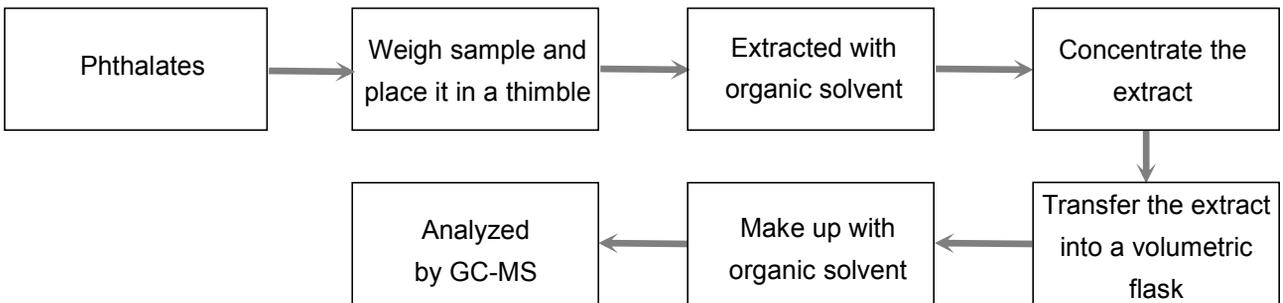
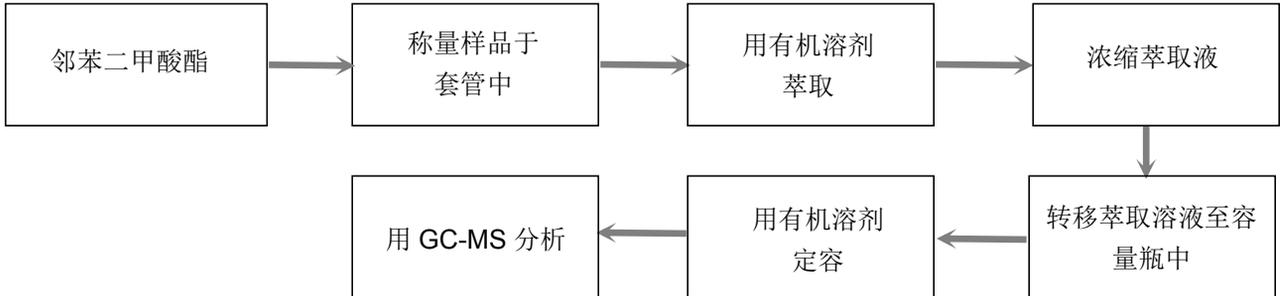
◆ IEC 62321-7-2:2017 Ed.1.0



◆ IEC 62321-6:2015 Ed.1.0



◆ IEC 62321-8:2017 Ed.1.0







部件图片

Photo(s) of the tested component(s)

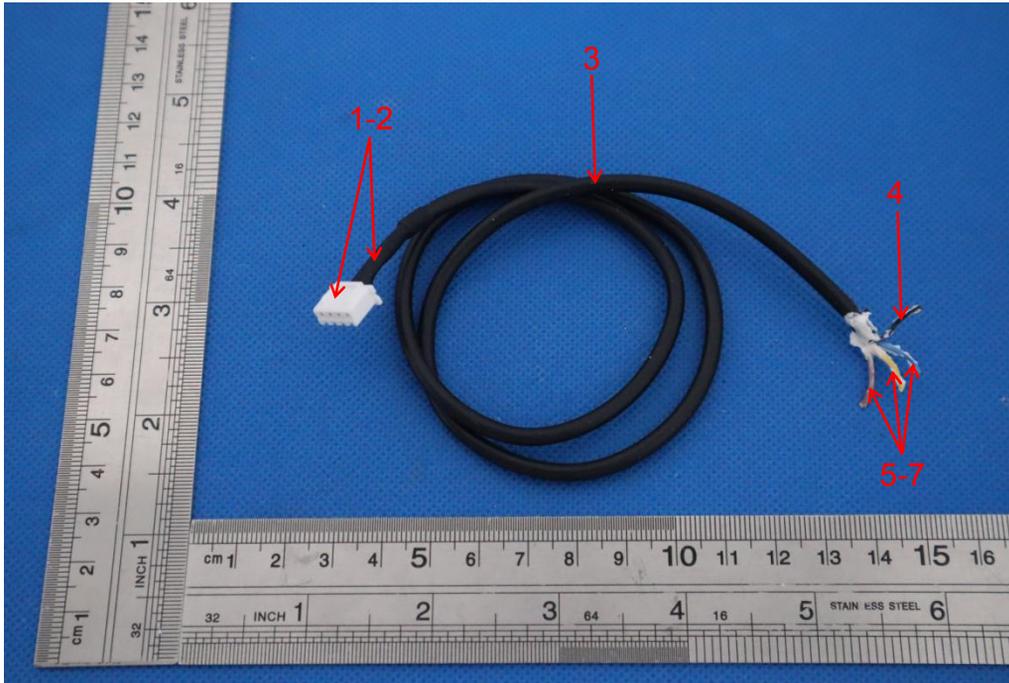


图 3/Fig.3

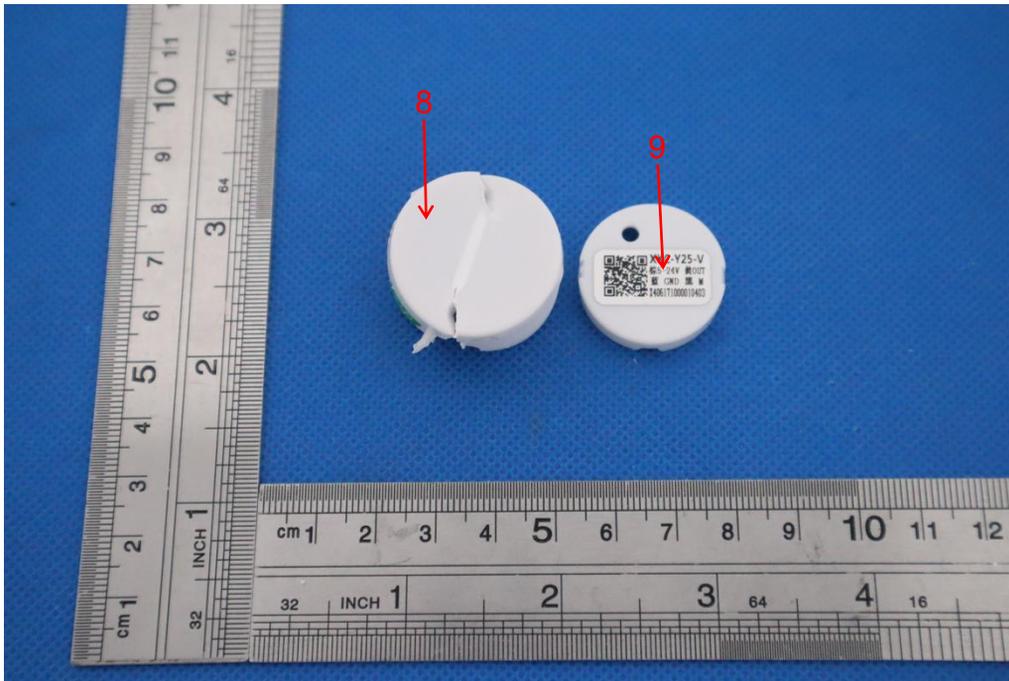


图 4/Fig.4

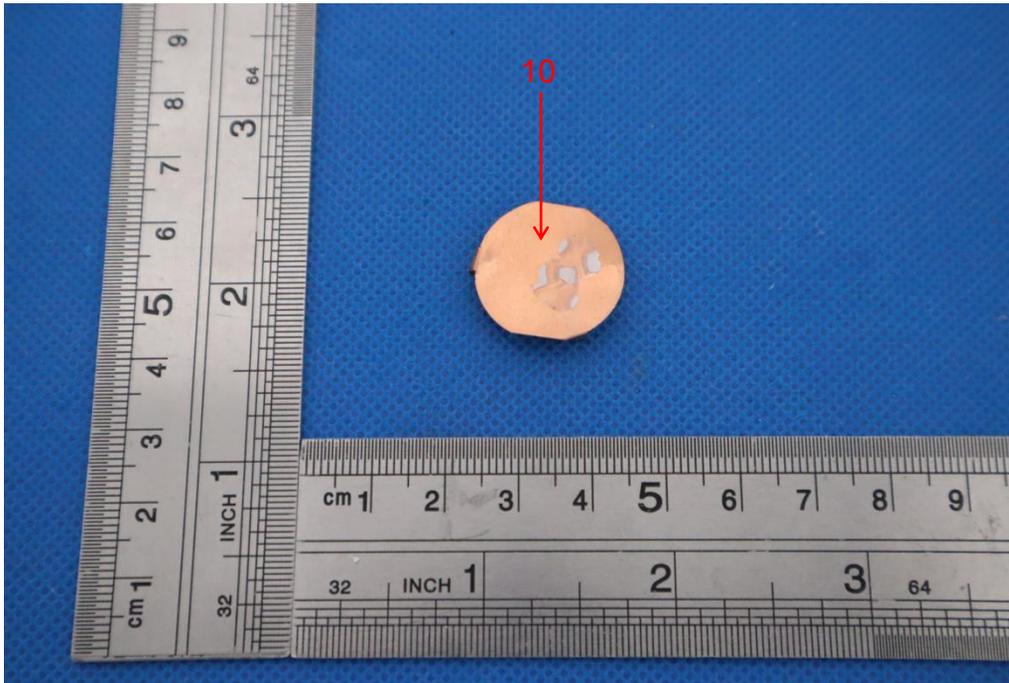


图 5/Fig.5

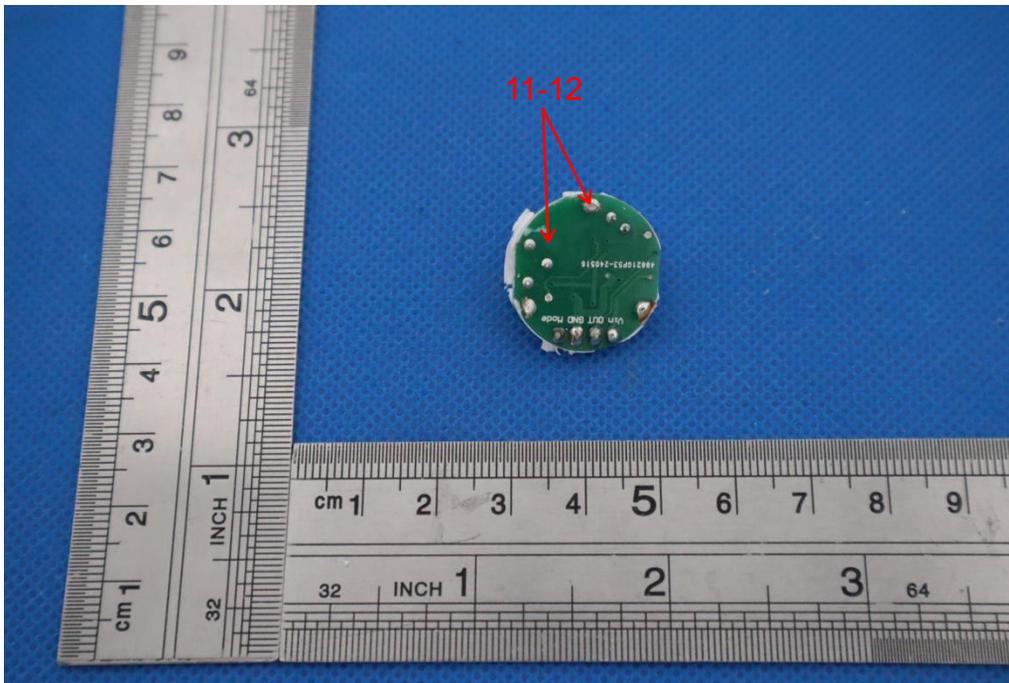


图 6/Fig.6

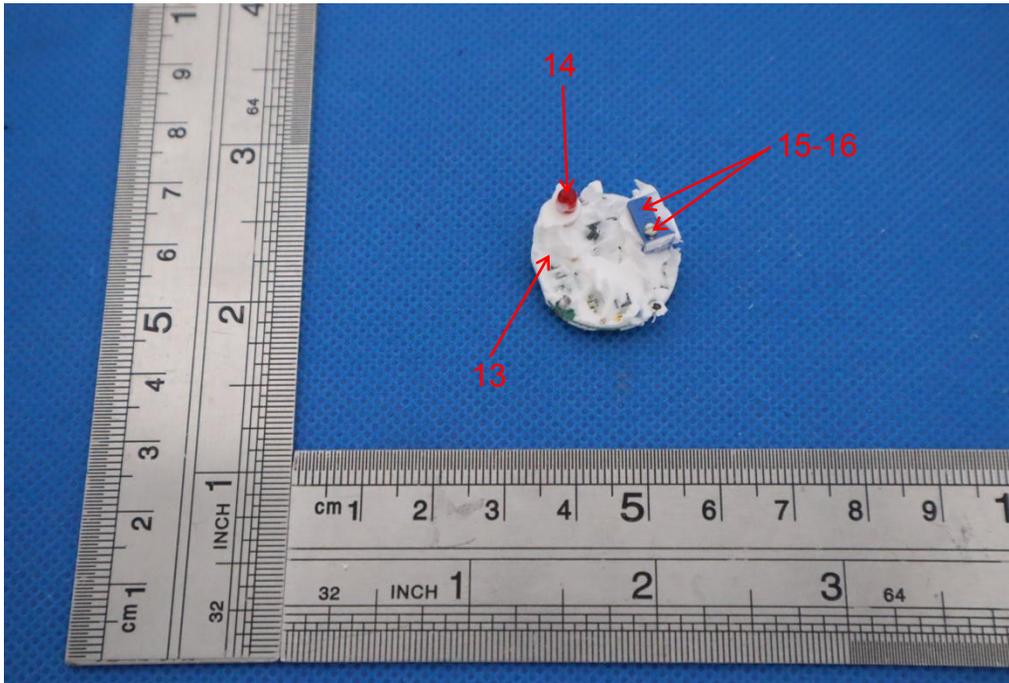
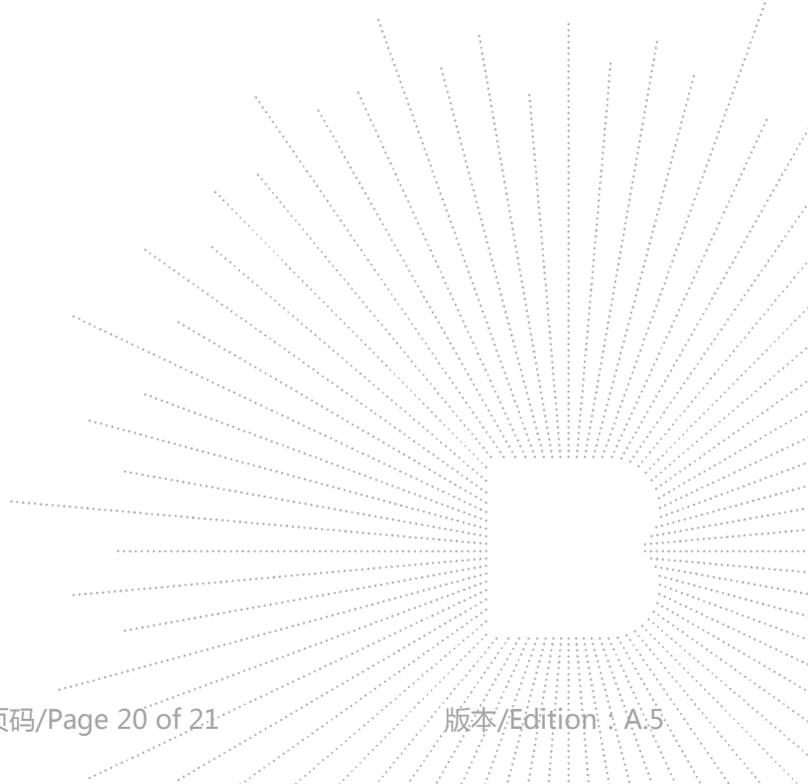


图 7/ Fig.7



声 明  
STATEMENT

1. 本次检测所用的测量设备的量值均可以溯源到国家计量标准。  
The equipment lists are traceable to the national reference standards.
2. 检测报告未经本实验室书面批准，不得部分复制。  
The test report can not be partially copied unless prior written approval is issued from our lab.
3. 检测报告未加盖“检测检测专用章”无效。  
The test report is invalid without the "special seal for inspection and testing".
4. 检测报告无批准人员签字无效。  
The test report is invalid without the signature of the approver.
5. 本次检测的结果仅对所检测样品有效。  
The test process and test result is only related to the Unit Under Test.
6. 样品的相关信息由委托单位提供，实验室不对其真实性负责。  
Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. 无 CMA 标志的检测报告，仅供科研、教学、企业产品研发及内部质量控制目的用。  
The test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.
8. 本实验室的质量体系符合 ISO/IEC17025 标准的要求。  
The quality system of our laboratory is in accordance with ISO/IEC17025.
9. 如对本检测报告有异议，可在收到检测报告后 15 天内向本单位申诉，逾期不予受理。  
If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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※※※※※ END ※※※※※