

TEST REPORT

检测报告

Applicant : SUzhou Anlaiqiang Electronic technology Co., Ltd
委托方 : 苏州安来强电子科技有限公司
Address : North of the 4th floor of plant 4#, NO.599, Taishan Road, Suzhou New
地址 : District
: 苏州市高新区泰山路 599 号 4#厂房四层北

Report on the submitted samples said to be:

委托检测的样品及申请者对样品的说明如下 :

Sample Name(s) : DC Contactor
样品名称 : 直流接触器
Trade Mark :
商标 : ALQ
Tested Model No. :
测试型号 : EVQ5K/EVQ5KH/EVQ5KG
Sample Received Date : September 09, 2025
样品接收日期 : 2025 年 09 月 09 日
Testing Period : September 09, 2025 ~ September 18, 2025
样品检测日期 : 2025 年 09 月 09 日~2025 年 09 月 18 日
Date of Report : September 22, 2025
报告签发日期 : 2025 年 09 月 22 日
Testing Location : Room 101-106/202-206, Building 037, No.166, Jinghua Road, Meixu Street,
样品检测地址 : Ningbo High-tech Zone, Yinzhou District, Ningbo, Zhejiang, China
: 浙江省宁波市鄞州区高新区梅墟街道菁华路 166 号 037 幢 101-106、
202-206
Test Results : Please refer to next page(s).
检测结果 : 参见后续页。

Signed for and on behalf of LCS

Miranda Mo

Miranda Mo/Laboratory Manager



TEST REQUEST 检测要求	CONCLUSION 结论
As specified by client, based on the performed tests on submitted sample, the result of Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, Dibutyl Phthalate(DBP), Butylbenzyl Phthalate(BBP), Di-2-ethylhexyl Phthalate(DEHP) and Diisobutyl phthalate(DIBP) content comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863. 根据客户的要求，检测其所提交样品中铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr(VI))、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸(2-乙基己基酯)(DEHP)和邻苯二甲酸二异丁酯(DIBP)含量并判定检测结果对于欧盟 RoHS 指令 2011/65/EU 及其修订指令(EU) 2015/863 中限值要求的符合性。	PASS (合格)

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A. EU RoHS Directive 2011/65/EU and its amendments 欧盟 RoHS 指令 2011/65/EU 及其修订指令

Test method: Refer to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF).

检测方法: 参照IEC 62321-3-1:2013, 采用X射线荧光光谱仪(XRF光谱仪)进行样品筛选扫描检测。

Test result(s):

检测结果:

Seq. No. 样品 序号	Sample Description 样品描述	Screen Result(s) 扫描结果						Date of sample submission/ resubmission 样品提交/再 次提交日期
		镉 (Cd)	铅 (Pb)	汞 (Hg)	铬 (Cr▼)	溴 Br▼		
						多溴联苯 (PBBs)	多溴二苯 醚(PBDEs)	
1	Grey Plastic 灰色塑料	BL	BL	BL	BL	BL	BL	2025-09-09
2	Black Adhesive 黑色胶	BL	BL	BL	BL	BL	BL	2025-09-09
3	White Glue 白色胶	BL	BL	BL	BL	BL	BL	2025-09-09
4	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
5	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
6	White Plastic 白色塑料	BL	BL	BL	BL	BL	BL	2025-09-09
7	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
8	White Thread Leather 白色线皮	BL	BL	BL	BL	BL	BL	2025-09-09
9	Blue Thread Leather 蓝色线皮	BL	BL	BL	BL	BL	BL	2025-09-09
10	Silver Metal Wire 银色金属丝	BL	BL	BL	BL	/	/	2025-09-09
11	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
12	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
13	Golden Metal 金色金属	BL	BL	BL	BL	/	/	2025-09-09
14	Golden Metal 金色金属	BL	BL	BL	BL	/	/	2025-09-09
15	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
16	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
17	Grey Plastic 灰色塑料	BL	BL	BL	BL	BL	BL	2025-09-09
18	Black Plastic 黑色塑料	BL	BL	BL	BL	BL	BL	2025-09-09



Seq. No. 样品 序号	Sample Description 样品描述	Screen Result(s) 扫描结果						Date of sample submission/ resubmission 样品提交/再 次提交日期
		镉 (Cd)	铅 (Pb)	汞 (Hg)	铬 (Cr▼)	溴 Br▼		
						多溴联苯 (PBBs)	多溴二苯 醚(PBDEs)	
19	Silver Magnet 银色磁铁	BL	BL	BL	BL	/	/	2025-09-09
20	Black Metal Spring 黑色金属弹簧	BL	BL	BL	BL	/	/	2025-09-09
21	Black Metal Spring 黑色金属弹簧	BL	BL	BL	BL	/	/	2025-09-09
22	Ferrous Metal 黑色金属	BL	BL	BL	BL	/	/	2025-09-09
23	Black Plastic 黑色塑料	BL	BL	BL	BL	BL	BL	2025-09-09
24	White Plastic 白色塑料	BL	BL	BL	BL	BL	BL	2025-09-09
25	Silver Metal 银色金属	BL	BL	BL	BL	/	/	2025-09-09
26	Green Pcb Board 绿色 PCB 板	BL	BL	BL	BL	BL	BL	2025-09-09



Note:

备注:

1. Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis(for Cr(VI)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013(Unit: mg/kg).

检测结果为 XRF 荧光扫描的初步检测结果, 如果浓度超出 IEC 62321-3-1:2013(单位: mg/kg)规定的最低警戒值应进一步采用化学方法检测, 采用 ICP 测(Cd, Pb 和 Hg), UV-Vis 测(Cr(VI)), GC-MS 测(PBBs 和 PBDEs)。

Element 检测元素	Polymers 聚合物	Metal 金属	Composite Material 合成材料
Cd 镉	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb 铅	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg 汞	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr 铬	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br 溴	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

Remark:

备注:

- BL= Below Limit 低于筛选限值
 - OL= Over Limit 高于筛选限值
 - X= The range of needing to do further testing 需要做进一步检测的范围
 - 3σ = The reproducibility of analytical instruments 表明分析仪器的重现性
 - N/A= Not applicable 不适用
 - LOD= Limit of detection 检出限
2. The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
RoHS 元素的 XRF 荧光扫描检测 – 由非均质材料组成的样品检测数据与实际含量可能不同。
3. The maximum permissible limit is quoted from the document RoHS Directive 2011/65/EU with amendment (EU) 2015/863.
最大允许限值引自 RoHS 指令 2011/65/EU 及其修订指令(EU) 2015/863。
4. ▼=For restricted substances PBBs and PBDEs, the results show the total Br content, the restricted substance was Cr(VI), and the results showed the total Cr content.
▼=限制物质 PBBs 与 PBDEs 的检测结果显示以溴元素含量表示, Cr(VI)的检测结果显示以铬元素含量表示。



RoHS Restricted Substances RoHS 指令限制物质	Maximum Concentration Value (mg/kg) (by weight in homogenous materials) 最大浓度 (mg/kg)(均质材料中的重量比)
Cadmium(Cd) 镉(Cd)	100
Lead(Pb) 铅(Pb)	1000
Mercury(Hg) 汞(Hg)	1000
Hexavalent Chromium(Cr(VI)) 六价铬(Cr(VI))	1000
Polybrominated biphenyls(PBBs) 多溴联苯(PBBs)	1000
Polybrominated diphenylethers(PBDEs) 多溴二苯醚(PBDEs)	1000
Dibutyl Phthalate(DBP) 邻苯二甲酸二丁酯(DBP)	1000
Butylbenzyl Phthalate(BBP) 邻苯二甲酸丁苄酯(BBP)	1000
Bis(2-ethylhexyl) Phthalate(DEHP) 邻苯二甲酸二(2-乙基己)酯(DEHP)	1000
Diisobutyl phthalate(DIBP) 邻苯二甲酸二异丁酯(DIBP)	1000

Disclaimers:

声明:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes. The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect(e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

XRF 扫描报告结果仅供参考。申请人应根据本 XRF 扫描报告结果自行判断所提供检测的样品是否符合自己预期用途。影响 XRF 扫描检测结果的不确定因素很多,包括但不限于如样品大小、厚度、面积、表面平整度、仪器参数和基质效应(例如:塑胶、橡胶、金属、玻璃、陶瓷等等)。定量结果需要进一步的相关化学仪器分析以及湿式化学处理才能得出。



B. EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863 on DBP, BBP, DEHP & DIBP content

欧盟 RoHS 指令及其修订指令(EU) 2015/863 关于邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP)的含量

Test method:

检测方法:

DBP, BBP, DEHP & DIBP Content:

Refer to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP)含量:

参照 IEC 62321-8:2017 检测方法, 采用有机溶剂萃取, 气相色谱-质谱联用仪(GC-MS)进行检测。

Test result(s):

检测结果:

1) DBP, BBP, DEHP & DIBP 邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP)

Tested Item(s) 检测项目	MDL (mg/kg)	Test Result(s) 检测结果 (mg/kg)	Limit 限值 (mg/kg)
		1+6+17+18	
Dibutyl Phthalate(DBP) Content 邻苯二甲酸二丁酯(DBP)含量	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content 邻苯二甲酸丁苄酯(BBP)含量	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content 邻苯二甲酸(2-乙基己基酯)(DEHP)含量	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content 邻苯二甲酸二异丁酯(DIBP)含量	50	N.D.	1000

Tested Item(s) 检测项目	MDL (mg/kg)	Test Result(s) 检测结果 (mg/kg)	Limit 限值 (mg/kg)
		2+3	
Dibutyl Phthalate(DBP) Content 邻苯二甲酸二丁酯(DBP)含量	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content 邻苯二甲酸丁苄酯(BBP)含量	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content 邻苯二甲酸(2-乙基己基酯)(DEHP)含量	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content 邻苯二甲酸二异丁酯(DIBP)含量	50	N.D.	1000



Tested Item(s) 检测项目	MDL (mg/kg)	Test Result(s) 检测结果 (mg/kg)	Limit 限值 (mg/kg)
		8+9	
Dibutyl Phthalate(DBP) Content 邻苯二甲酸二丁酯(DBP)含量	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content 邻苯二甲酸丁苄酯(BBP)含量	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content 邻苯二甲酸(2-乙基己基酯)(DEHP)含量	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content 邻苯二甲酸二异丁酯(DIBP)含量	50	N.D.	1000

Tested Item(s) 检测项目	MDL (mg/kg)	Test Result(s) 检测结果 (mg/kg)	Limit 限值 (mg/kg)
		23+24+26	
Dibutyl Phthalate(DBP) Content 邻苯二甲酸二丁酯(DBP)含量	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content 邻苯二甲酸丁苄酯(BBP)含量	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content 邻苯二甲酸(2-乙基己基酯)(DEHP)含量	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content 邻苯二甲酸二异丁酯(DIBP)含量	50	N.D.	1000

Note:

备注:

MDL = Method Detection Limit

MDL = 方法检出限

N.D.=Not Detected(<MDL)

N.D.=未检出(低于 MDL)

mg/kg= milligram per kilogram=ppm

mg/kg =毫克每千克=百万分之一

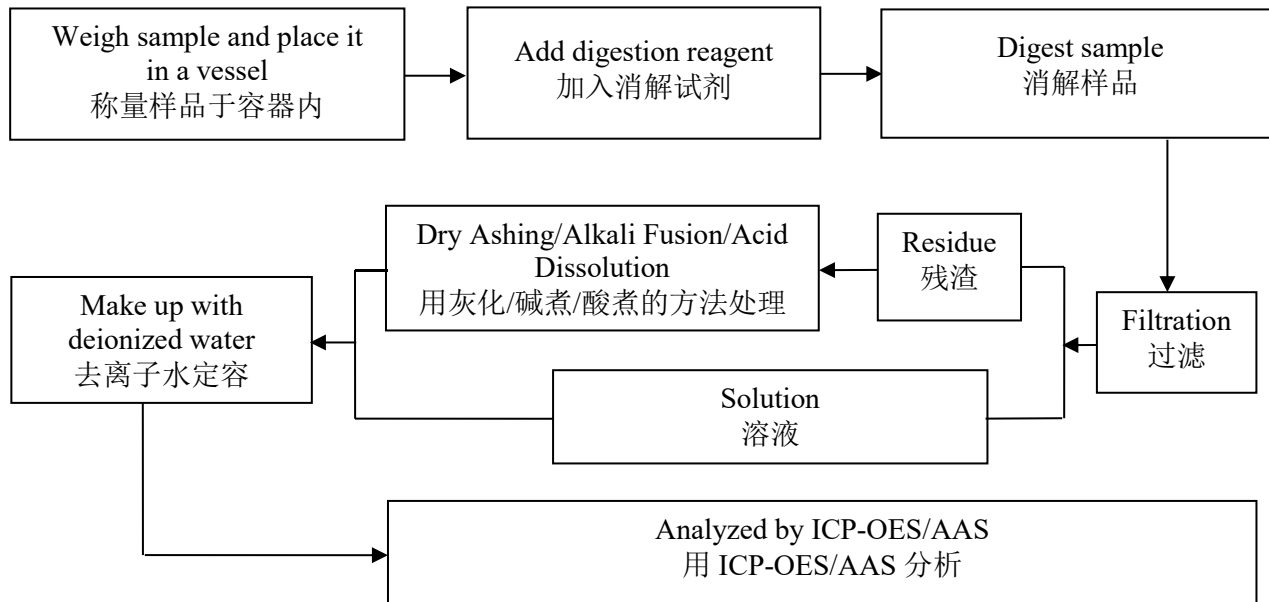
According to customer's requirement, only the appointed materials have been tested.

根据客户要求, 仅测试指定材料。

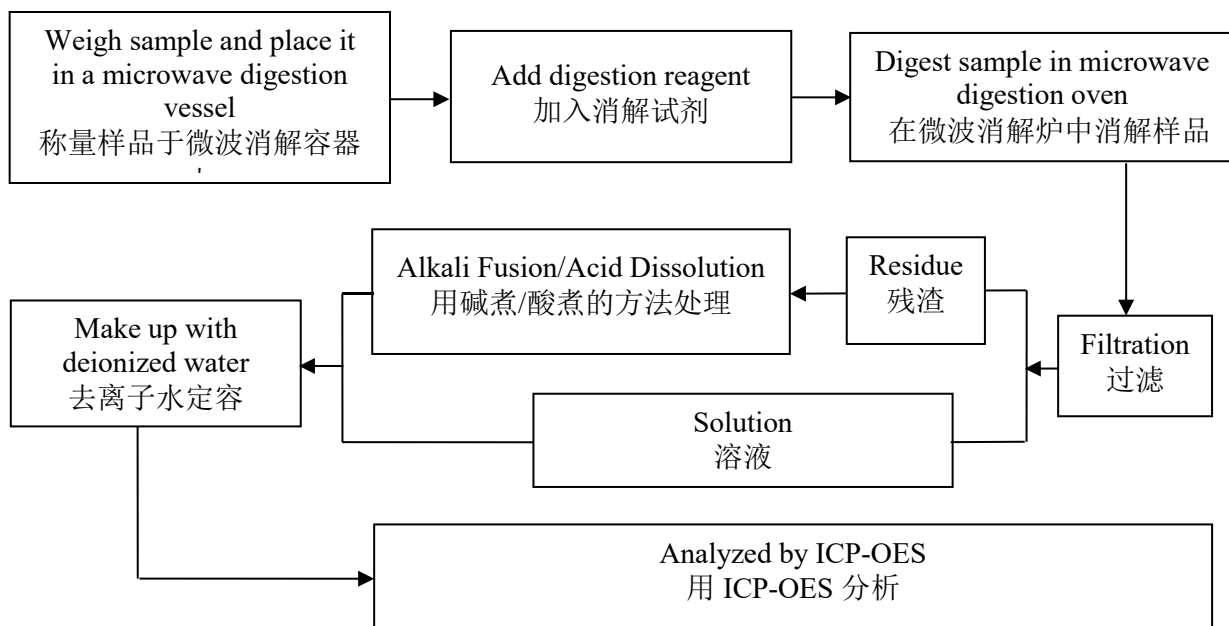


Test Process 检测流程

1. Lead(Pb) & Cadmium(Cd): IEC 62321-5:2013 铅(Pb)和镉(Cd): IEC 62321-5:2013

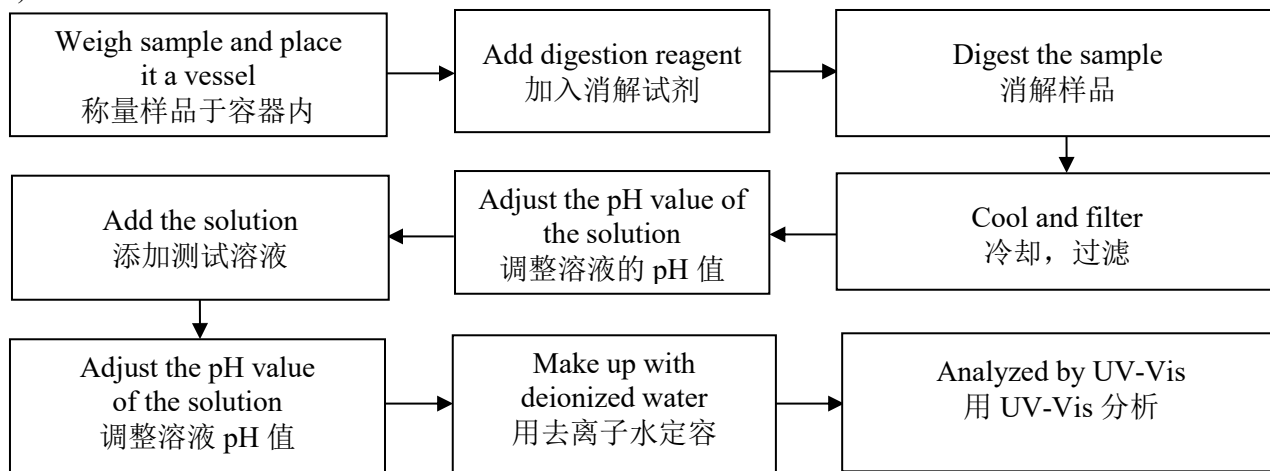


2. Hg: IEC 62321-4:2013+AMD1:2017 CSV 汞: IEC 62321-4:2013+AMD1:2017 CSV

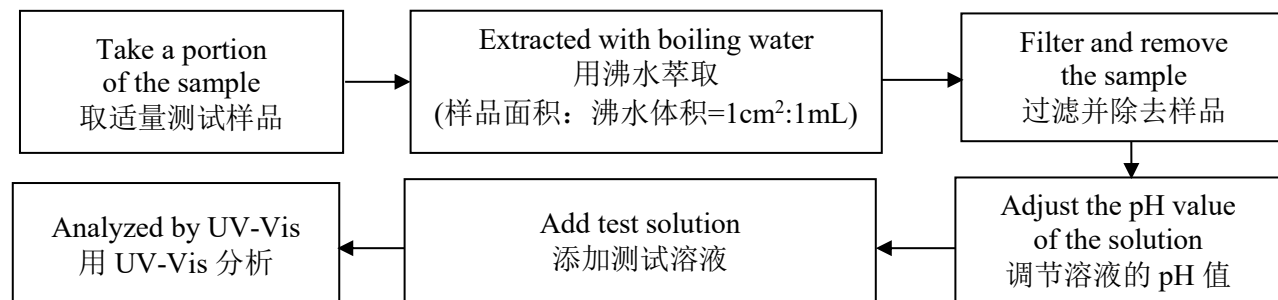
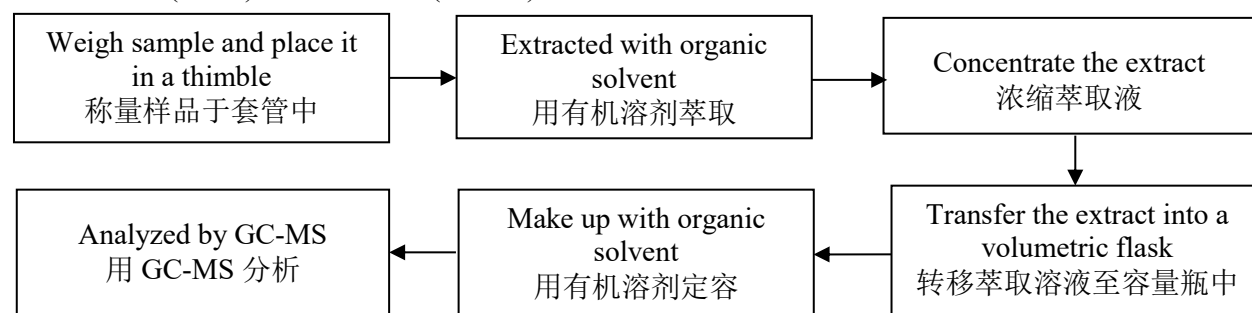


3. Hexavalent Chromium(Cr(VI))六价铬(Cr(VI))

1) IEC 62321-7-2:2017

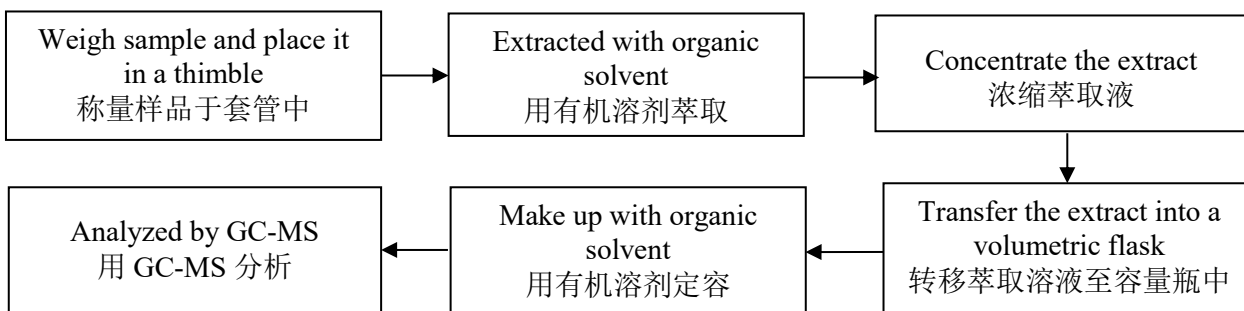


2) IEC 62321-7-1:2015

4. Polybrominated Biphenyls(PBBs) & Polybrominated Diphenyl Ethers(PBDEs): IEC 62321-6:2015
多溴联苯(PBBs)和多溴二苯醚(PBDEs): IEC 62321-6:2015

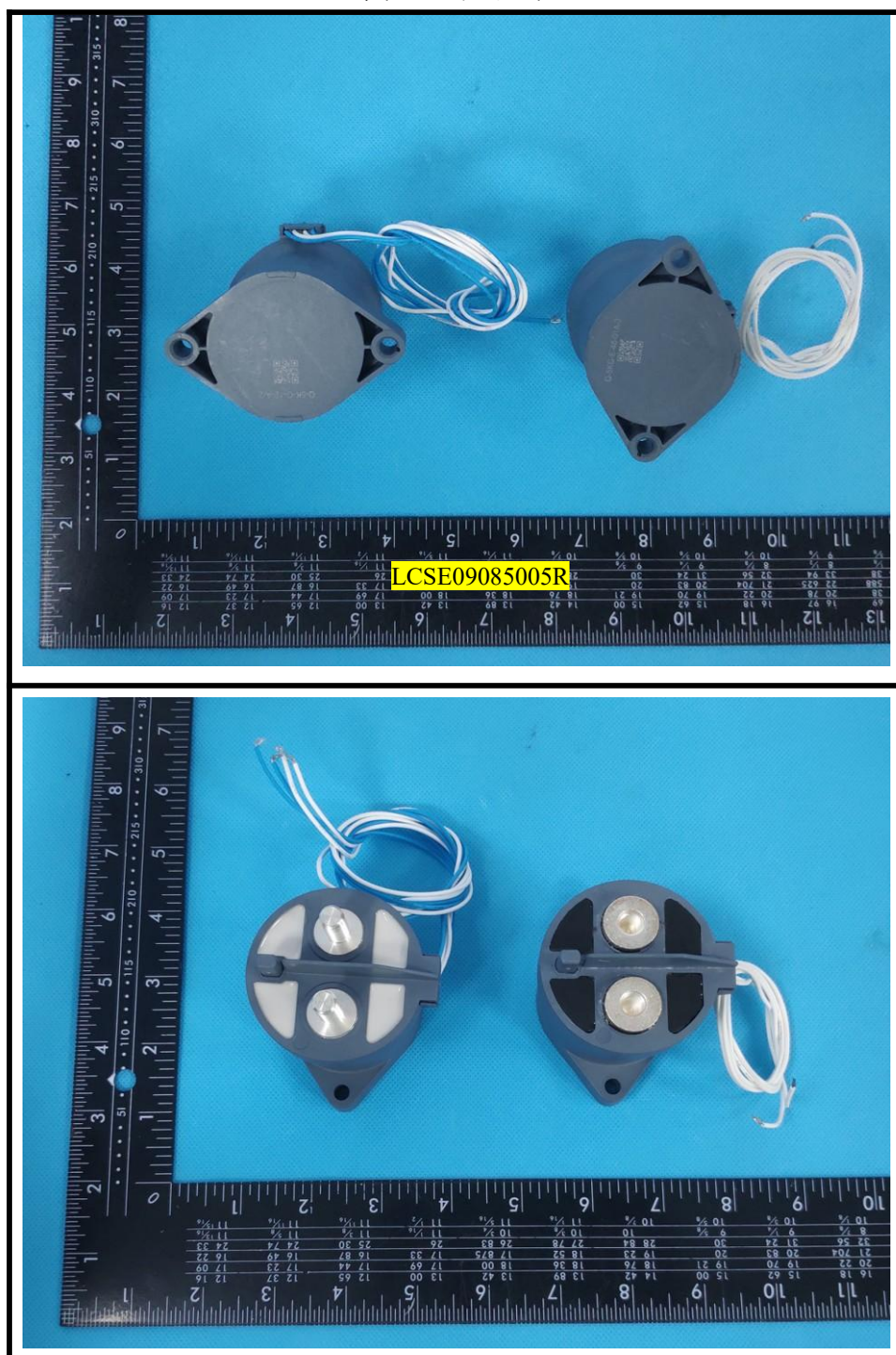
5. Phthalates(DBP, BBP, DEHP&DIBP): IEC 62321-8:2017

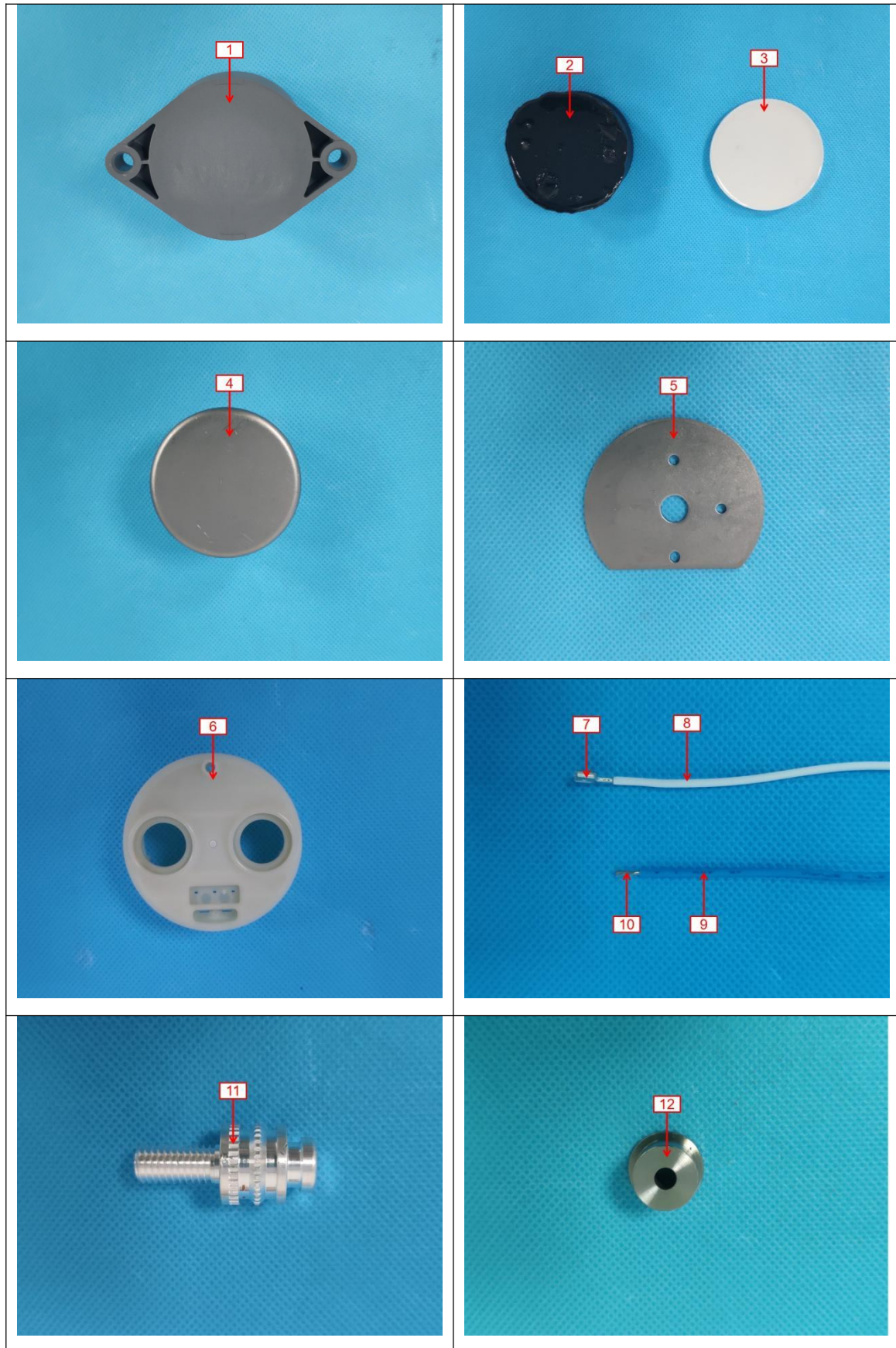
邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP): IEC 62321-8:2017

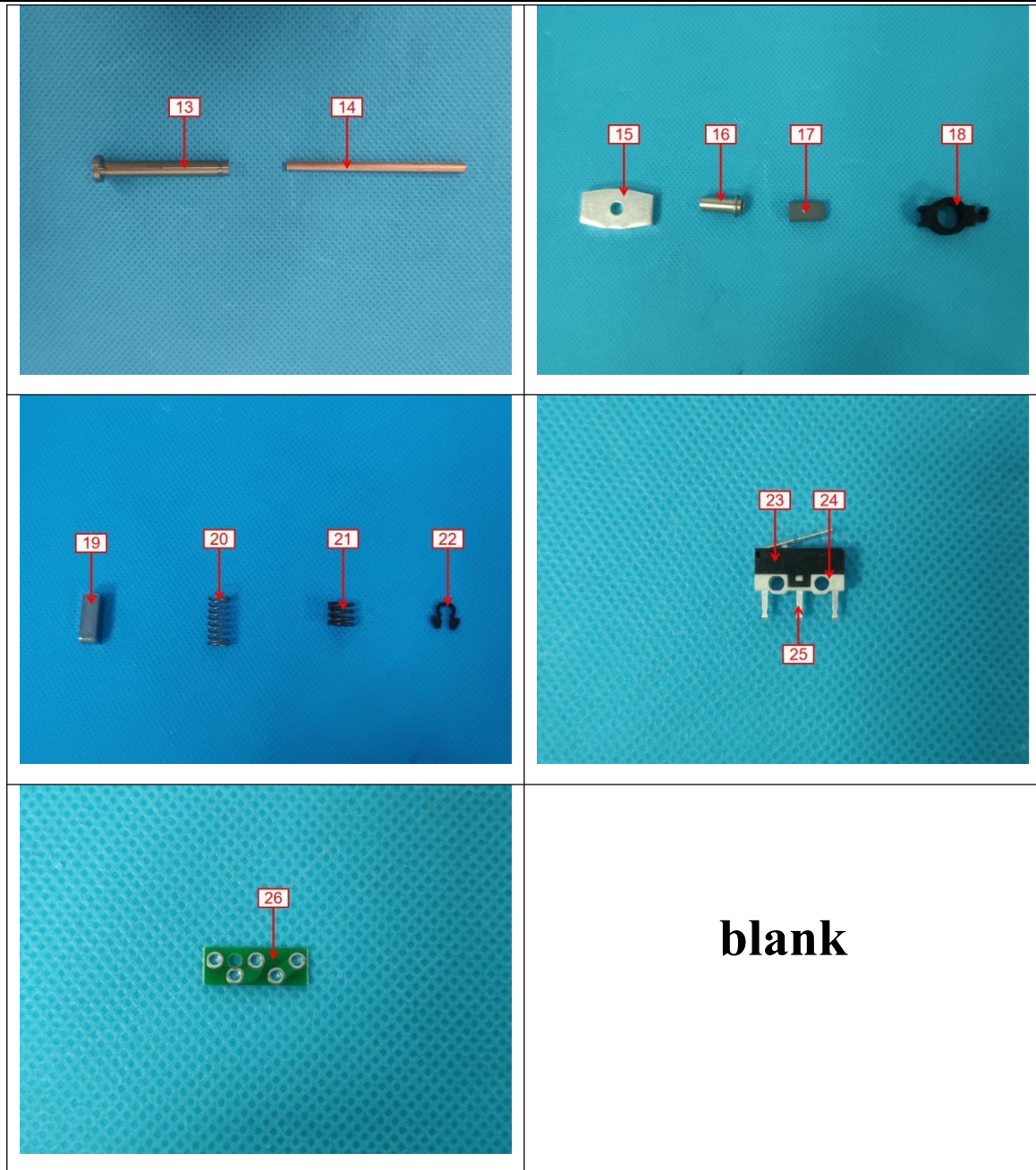


The photo(s) of the sample

样品图片







Statement:**声明:**

1. The test report is invalid without the signature of the approver and the special seal for the company's report;
未经批准人签字及加盖公司报告专用章的检测报告无效;
2. The company name, address and sample information shown on the report were provided by the applicant who should be responsible for the authenticity which are not verified by LCS;
报告抬头公司名称、地址及样品信息由申请者提供并对其真实性负责, 并非由 LCS 核实;
3. The test results in this report are only responsible for the tested samples;
本报告检测结果仅对受测样品负责;
4. Without written approval of LCS, this report can't be reproduced except in full;
未经 LCS 书面同意, 不得部分复制本报告;
5. In case of any discrepancy between the corresponding Chinese and English contents in the test report, the Chinese version shall prevail.
检测报告中对应中文与英文内容如有差异, 以中文版本为准。

*** End of Report ***

*** 报告结束 ***

