



Verification Report 验证报告

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 District
地址 : 苏州高新区泰山路 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 : N/A
Part No. : EVQ150-200-250-300-350-400-500
型号 :
Sample Received Date : July 24, 2024
样品接收日期 : 2024 年 07 月 24 日
Testing Period : July 24, 2024 ~August 01, 2024
样品检测日期 : 2024 年 07 月 24 日 ~ 2024 年 08 月 01 日
Date of Report : August 01, 2024
报告签发日期 : 2024 年 08 月 01 日
Testing Location : 202-206, Building 037, No. 166, Jinghua Road, Ningbo High-tech Zone, Ningbo
样品检测地址 : City, Zhejiang Province, China
: 中国浙江省宁波市国家高新技术产业开发区菁华路 166 号 037 幢 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

Zora Zhao

Zora Zhao /Laboratory Manager



Ningbo LCS Standard Technology Service Co., Ltd. 宁波立讯标准技术服务有限公司

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TEST REQUEST 检测要求	CONCLUSION 结论
<p>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.</p> <p>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。</p>	<p style="text-align: center;">PASS (合格)</p>



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Results 结果:

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: With reference to IEC 62321-1:2013&IEC 62321-2:2021&IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

检测方法: 参考IEC 62321-1:2013, IEC 62321-2:2021和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

Seq. No. 样品序号	Sample Description 样品描述	Results 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	Silver metal 银色金属	BL	BL	BL	BL	/	/	2024-07-24
2	Milky plastic 奶白色塑料	BL	BL	X	BL	X	X	2024-07-24
3	Screw 螺丝	BL	BL	BL	X	/	/	2024-07-24
4	Red threads 红色线皮	BL	BL	BL	BL	BL	BL	2024-07-24
5	Black thread 黑色线皮	BL	BL	BL	BL	BL	BL	2024-07-24
6	Blue thread 蓝色线皮	BL	BL	BL	BL	BL	BL	2024-07-24
7	White metallic 白色金属	BL	BL	BL	BL	/	/	2024-07-24
8	Milky plastic 奶白色塑料	BL	BL	BL	BL	X	X	2024-07-24
9	Resistance 电阻	BL	BL	BL	BL	/	/	2024-07-24
10	Capacitance 电容	BL	BL	BL	BL	/	/	2024-07-24
11	Green PCB 绿色 PCB	BL	BL	BL	X	X	X	2024-07-24
12	Resistance 电阻	BL	BL	BL	BL	/	/	2024-07-24
13	Resistance 电阻	BL	BL	BL	BL	/	/	2024-07-24
14	Solder 焊锡	BL	BL	BL	BL	/	/	2024-07-24
15	Silver metal 银色金属	BL	BL	BL	BL	/	/	2024-07-24
16	Milky plastic 奶白色塑料	BL	BL	BL	BL	X	X	2024-07-24
17	Silver metal 银色金属	BL	BL	BL	X	/	/	2024-07-24
18	White metallic 白色金属	BL	BL	BL	BL	/	/	2024-07-24
19	Milky plastic 奶白色塑料	BL	BL	BL	BL	X	X	2024-07-24



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Seq. No. 样品序号	Sample Description 样品描述	Results 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)	
20	Green PCB 绿色 PCB	BL	BL	BL	X	X	X	2024-07-24
21	Silver metal 银色金属	BL	OL	BL	BL	/	/	2024-07-24
22	White metallic 白色金属	BL	BL	BL	BL	/	/	2024-07-24
23	White plastic 白色塑料	BL	BL	BL	BL	X	X	2024-07-24
24	Black plastic 黑色塑料	BL	BL	BL	BL	X	X	2024-07-24
25	Spring 弹簧	BL	BL	BL	X	/	/	2024-07-24
26	Black plastic 黑色塑料	BL	BL	BL	X	BL	BL	2024-07-24
27	Silver metal 银色金属	BL	BL	BL	X	/	/	2024-07-24
28	Spring 弹簧	BL	BL	BL	X	/	/	2024-07-24
29	Gold-toned metal 金色金属	BL	BL	BL	BL	/	/	2024-07-24
30	Black plastic 黑色塑料	BL	BL	BL	BL	BL	BL	2024-07-24
31	Silver metal 银色金属	BL	BL	BL	X	/	/	2024-07-24
32	Silver metal 银色金属	BL	BL	BL	BL	/	/	2024-07-24
33	Silver metal 银色金属	BL	BL	BL	BL	/	/	2024-07-24
34	Milky plastic 奶白色塑料	BL	BL	BL	BL	X	X	2024-07-24
35	Milky plastic 奶白色塑料	BL	BL	BL	BL	X	X	2024-07-24
36	Yellow stickers 黄色贴纸	BL	BL	BL	BL	BL	BL	2024-07-24
37	Gold-toned metal 金色金属	BL	BL	BL	BL	/	/	2024-07-24



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Note:
备注:

- 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

- 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。
- 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。
- ▼=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
Polybrominate ddiphenylethers(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 Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, DBP, BBP, DEHP & DIBP content
欧盟 RoHS 指令及其修订指令(EU) 2015/863 关于铅(Pb), 镉(Cd), 汞(Hg), 六价铬(Cr(VI)), 多溴联苯(PBBs), 多溴二苯醚(PBDEs)和邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP)的含量

Test method 检测方法:

Lead(Pb) & Cadmium(Cd) Content:

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES).

铅(Pb)和镉(Cd)含量:

参考 IEC 62321-5:2013 检测方法, 样品经酸消解后用电感耦合等离子体发射光谱仪(ICP-OES)进行检测。

Mercury(Hg) Content:

With reference to IEC 62321-4:2013+AMD1:2017 CSV, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES).

汞(Hg)含量:

参考 IEC 62321-4:2013+AMD1:2017 CSV 检测方法, 样品经酸消解后用电感耦合等离子体发射光谱仪(ICP-OES)进行检测。

Hexavalent Chromium(Cr(VI)) Content:

With reference to IEC 62321-7-1:2015 or IEC 62321-7-2:2017, analysis was performed by UV-visible spectrophotometer (UV-Vis).

六价铬(Cr(VI))含量:

参考 IEC 62321-7-1:2015 或者 IEC 62321-7-2:2017 检测方法, 用紫外-可见分光光度计(UV-Vis)进行检测。

PBBs & PBDEs Content:

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

多溴联苯(PBBs)和多溴二苯醚(PBDEs)含量:

参考 IEC 62321-6:2015 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。

DBP, BBP, DEHP & DIBP Content:

With reference 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:

参考 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。





1) The test results of Lead(Pb) & Cadmium(Cd) 铅(Pb)和镉(Cd)检测结果

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果			Limit (mg/kg) 限值
		21			
Lead(Pb) Content 铅(Pb)含量	5	2727 ^{#1}			1000

2) The test results of Mercury(Hg) 汞(Hg)检测结果

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果		Limit (mg/kg) 限值
		2	8	
Mercury(Hg) Content 汞(Hg)含量	5	N.D.	N.D.	1000

3) The test results of Hexavalent Chromium(Cr(VI)) 六价铬(Cr(VI))检测结果

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果			Limit (mg/kg) 限值
		11	20	26	
Hexavalent Chromium(Cr(VI)) Content 六价铬(Cr(VI))含量	8	N.D.	N.D.	N.D.	1000

4) The test results of Hexavalent Chromium(Cr(VI))(for coating on metal) 六价铬(Cr(VI)) (金属镀层)检测结果

Tested Items 检测项目	MDL ($\mu\text{g}/\text{cm}^2$)	Results ($\mu\text{g}/\text{cm}^2$) 检测结果			Limit ($\mu\text{g}/\text{cm}^2$) 限值
		3	17	25	
Hexavalent Chromium(Cr(VI)) Content★ 六价铬(Cr(VI))含量	0.10 (LOQ)	N.D.	N.D.	N.D.	1000

Tested Items 检测项目	MDL ($\mu\text{g}/\text{cm}^2$)	Results ($\mu\text{g}/\text{cm}^2$) 检测结果			Limit ($\mu\text{g}/\text{cm}^2$) 限值
		27	28	31	
Hexavalent Chromium(Cr(VI)) Content★ 六价铬(Cr(VI))含量	0.10 (LOQ)	N.D.	N.D.	N.D.	1000





5) The test results of DBP, BBP, DEHP & DIBP 邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP)检测结果

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果		Limit (mg/kg) 限值
		4+5+6	20+23+24	
Dibutyl Phthalate(DBP) Content 邻苯二甲酸二丁酯(DBP)含量	50	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content 邻苯二甲酸丁苄酯(BBP)含量	50	N.D.	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.	N.D.	1000
Diisobutyl phthalate(DIBP) Content 邻苯二甲酸二异丁酯(DIBP)含量	50	N.D.	N.D.	1000

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果	Limit (mg/kg) 限值
		2+8+11+16+19	
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 Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果	Limit (mg/kg) 限值
		30+34+35+36	
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



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6) The test results of PBBs & PBDEs 多溴联苯(PBBs)和多溴二苯醚(PBDEs)检测结果

Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果				Limit (mg/kg) 限值
		2	8	11	16	
Polybrominated Biphenyls(PBBs) Content 多溴联苯(PBBs)含量						
Monobromobiphenyl 一溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Dibromobiphenyl 二溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Tribromobiphenyl 三溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl 四溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromobiphenyl 五溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromobiphenyl 六溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromobiphenyl 七溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Octabromobiphenyl 八溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl 九溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl 十溴联苯	5	N.D.	N.D.	N.D.	N.D.	/
Total content 多溴联苯总含量	/	N.D.	N.D.	N.D.	N.D.	1000
Polybrominated Diphenylethers(PBDEs) Content 多溴二苯醚(PBDEs)含量						
Monobromodiphenyl ether 一溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether 二溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether 三溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether 四溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether 五溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether 六溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether 七溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether 八溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether 九溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether 十溴二苯醚	5	N.D.	N.D.	N.D.	N.D.	/
Total content 多溴二苯醚总含量	/	N.D.	N.D.	N.D.	N.D.	1000





Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果			Limit (mg/kg) 限值
		19	20	23	
Polybrominated Biphenyls(PBBs) Content 多溴联苯(PBBs)含量					
Monobromobiphenyl 一溴联苯	5	N.D.	N.D.	N.D.	/
Dibromobiphenyl 二溴联苯	5	N.D.	N.D.	N.D.	/
Tribromobiphenyl 三溴联苯	5	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl 四溴联苯	5	N.D.	N.D.	N.D.	/
Pentabromobiphenyl 五溴联苯	5	N.D.	N.D.	N.D.	/
Hexabromobiphenyl 六溴联苯	5	N.D.	N.D.	N.D.	/
Heptabromobiphenyl 七溴联苯	5	N.D.	N.D.	N.D.	/
Octabromobiphenyl 八溴联苯	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl 九溴联苯	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl 十溴联苯	5	N.D.	N.D.	N.D.	/
Total content 多溴联苯总含量	/	N.D.	N.D.	N.D.	1000
Polybrominated Diphenylethers(PBDEs) Content 多溴二苯醚(PBDEs)含量					
Monobromodiphenyl ether 一溴二苯醚	5	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether 二溴二苯醚	5	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether 三溴二苯醚	5	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether 四溴二苯醚	5	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether 五溴二苯醚	5	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether 六溴二苯醚	5	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether 七溴二苯醚	5	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether 八溴二苯醚	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether 九溴二苯醚	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether 十溴二苯醚	5	N.D.	N.D.	N.D.	/
Total content 多溴二苯醚总含量	/	N.D.	N.D.	N.D.	1000





Tested Items 检测项目	MDL (mg/kg)	Results (mg/kg) 检测结果			Limit (mg/kg) 限值
		24	34	35	
Polybrominated Biphenyls(PBBs) Content 多溴联苯(PBBs)含量					
Monobromobiphenyl 一溴联苯	5	N.D.	N.D.	N.D.	/
Dibromobiphenyl 二溴联苯	5	N.D.	N.D.	N.D.	/
Tribromobiphenyl 三溴联苯	5	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl 四溴联苯	5	N.D.	N.D.	N.D.	/
Pentabromobiphenyl 五溴联苯	5	N.D.	N.D.	N.D.	/
Hexabromobiphenyl 六溴联苯	5	N.D.	N.D.	N.D.	/
Heptabromobiphenyl 七溴联苯	5	N.D.	N.D.	N.D.	/
Octabromobiphenyl 八溴联苯	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl 九溴联苯	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl 十溴联苯	5	N.D.	N.D.	N.D.	/
Total content 多溴联苯总含量	/	N.D.	N.D.	N.D.	1000
Polybrominated Diphenylethers(PBDEs) Content 多溴二苯醚(PBDEs)含量					
Monobromodiphenyl ether 一溴二苯醚	5	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether 二溴二苯醚	5	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether 三溴二苯醚	5	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether 四溴二苯醚	5	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether 五溴二苯醚	5	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether 六溴二苯醚	5	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether 七溴二苯醚	5	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether 八溴二苯醚	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether 九溴二苯醚	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether 十溴二苯醚	5	N.D.	N.D.	N.D.	/
Total content 多溴二苯醚总含量	/	N.D.	N.D.	N.D.	1000





Note 备注:

- MDL = Method Detection Limit
MDL = 方法检出限
- N.D.=Not Detected(<MDL or LOQ)
N.D.=未检出(<低于 MDL 或者 LOQ)
- mg/kg = milligrams per kilogram
mg/kg =毫克每千克
- LOQ = Limit Of Quantification, The LOQ of Hexavalent chromium is 0.10 $\mu\text{g}/\text{cm}^2$
LOQ = 定量检测下限, 六价铬(Cr(VI)) 的 LOQ 为 0.10 $\mu\text{g}/\text{cm}^2$
- ★ = a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 $\mu\text{g}/\text{cm}^2$. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is N.D.(concentration less than 0.10 $\mu\text{g}/\text{cm}^2$). The sample coating is considered a non- Cr(VI) based coating.
c. The result between 0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$ is considered to be inconclusive, unavoidable coating variations may influence the determination.
★= a. 如果 Cr(VI)浓度大于 0.13 $\mu\text{g}/\text{cm}^2$, 则样品中的 Cr(VI)为阳性, 样品涂层被认为含有 Cr(VI).
b. 如果 Cr(VI)为 N.D.(浓度小于 0.10 $\mu\text{g}/\text{cm}^2$), 则样品中的 Cr(VI)为阴性, 样品涂层被认为是不含有 Cr(VI).
c. 如果 Cr(VI)浓度在 0.10 $\mu\text{g}/\text{cm}^2$ 和 0.13 $\mu\text{g}/\text{cm}^2$ 之间, 这样的结果被认为是不确定的, 不可避免的涂层变化可能影响测定。
- Information on storage conditions and production date of the tested samples is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.
被测样品的储存条件和生产日期的信息无法得到, 因此, Cr(VI)结果表示检测时样品的状态。
- 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。
- #1 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted as an alloying element in Copper containing up to 4% (40000ppm) by weight.
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 铜合金中的铅不超过 4%(40000ppm)。
- #2 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted in glass of cathode ray tubes, electronic components and fluorescent tubes.
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 阴极射线管, 电子元件以及日光灯中的玻璃含有的铅被豁免。
- #3 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted in electronic ceramic parts (e.g. piezoelectronic devices).
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 电子电气器件的陶瓷(电容中介电陶瓷除外)中的铅, 陶瓷复合材料中的铅(例如: 压电陶瓷器件)被豁免。
- #4 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 高熔点型焊料中的铅被豁免(例如铅基合金中的铅含量超过 85%)。
- #5 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted as an alloying element in Aluminum containing up to 0.4% (4000ppm) by weight.
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 铝合金中的铅不超过 0.4%(4000ppm)。
- #6 According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted in steel for machining purposes and in galvanised steel containing up to 0.35% (3500ppm) by weight.
根据欧盟 RoHS 指令 2011/65/EU 及其修订指令, 用于加工的钢和镀锌钢中铅不超过 0.35%(3500ppm)。
- 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。



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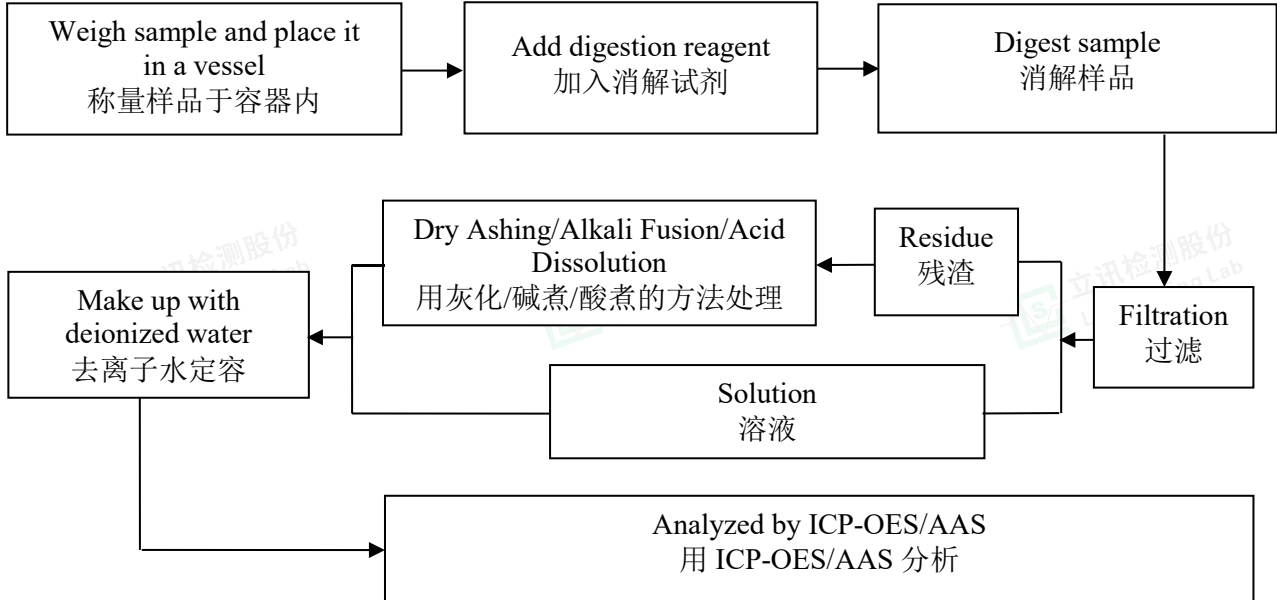
地址: 中国浙江省宁波市国家高新技术开发区梅墟街道菁华路 166 号 037 幢 101-106, 202-206

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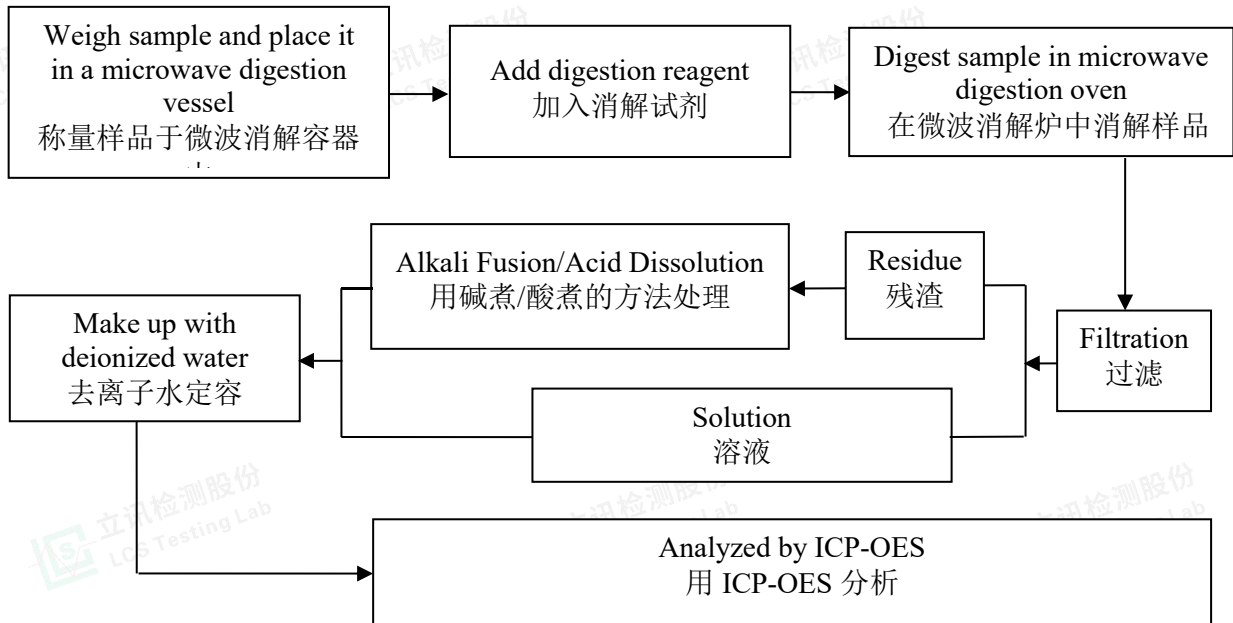


Test Process 检测流程

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



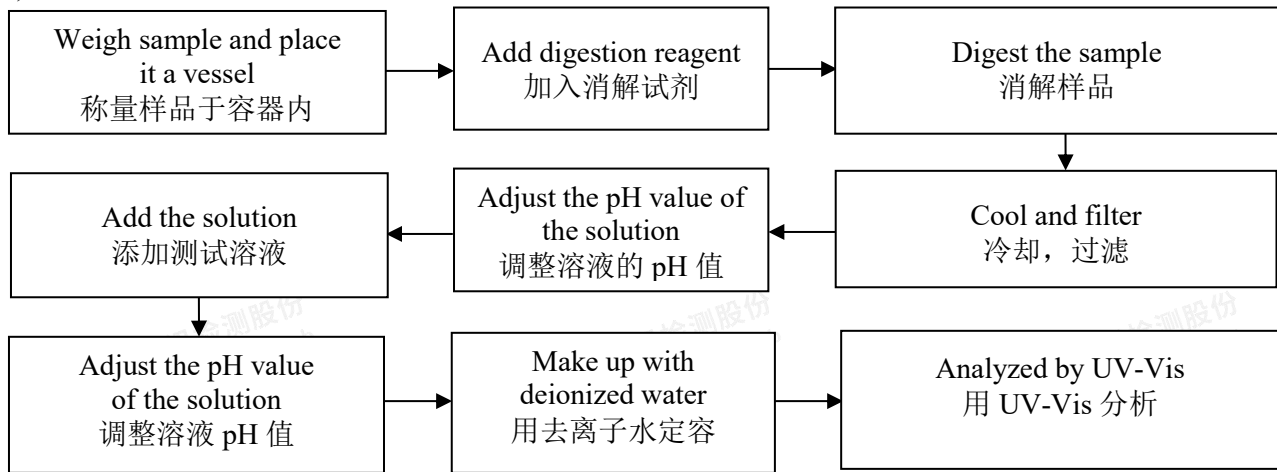
2. Hg: IEC 62321-4:2013+AMD1:2017 CSV 汞: IEC 62321-4:2013+AMD1:2017 CSV



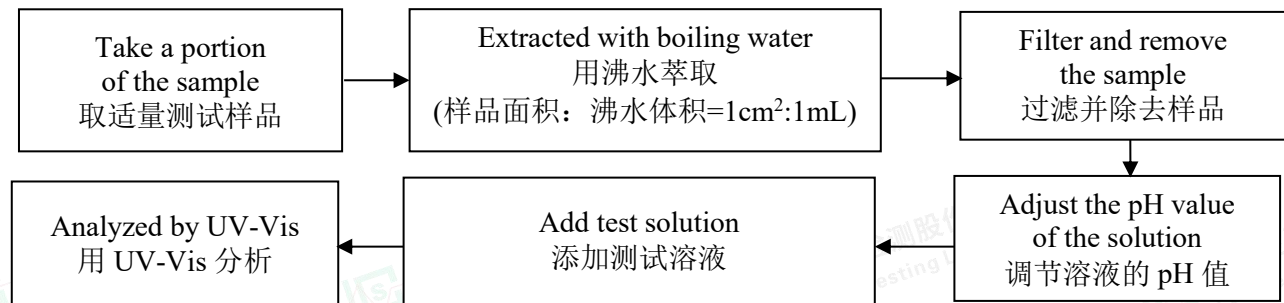


3. Hexavalent Chromium(Cr(VI))六价铬(Cr(VI))

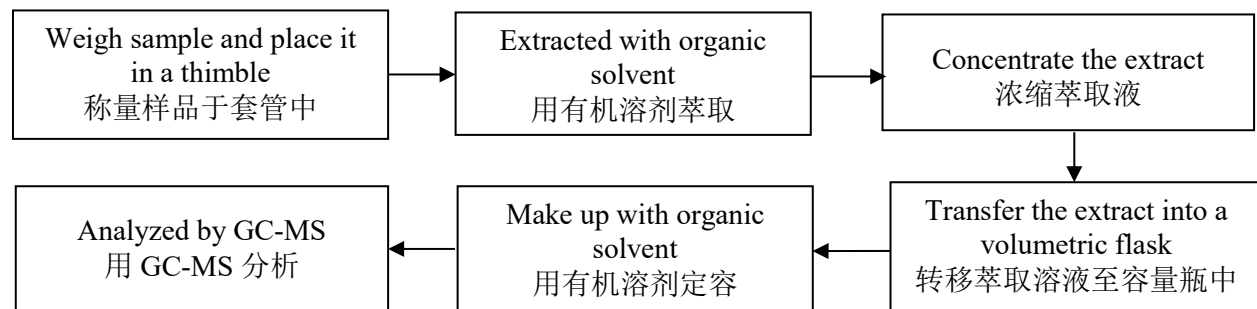
1) IEC 62321-7-2:2017



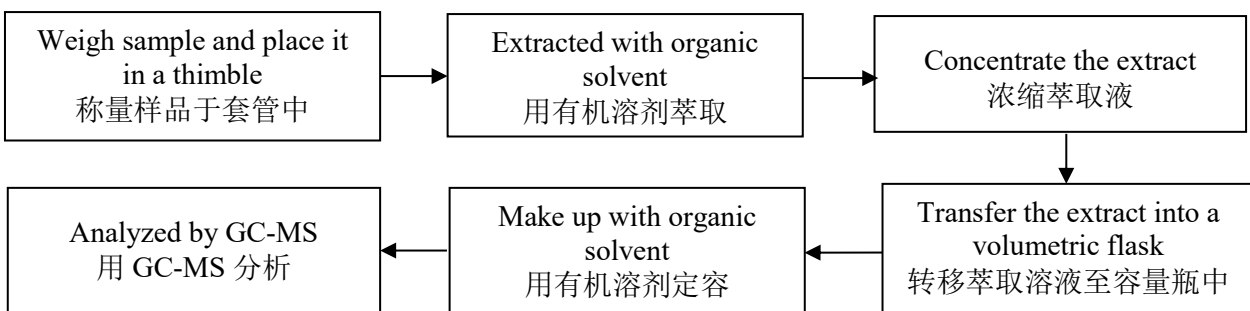
2) IEC 62321-7-1:2015



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

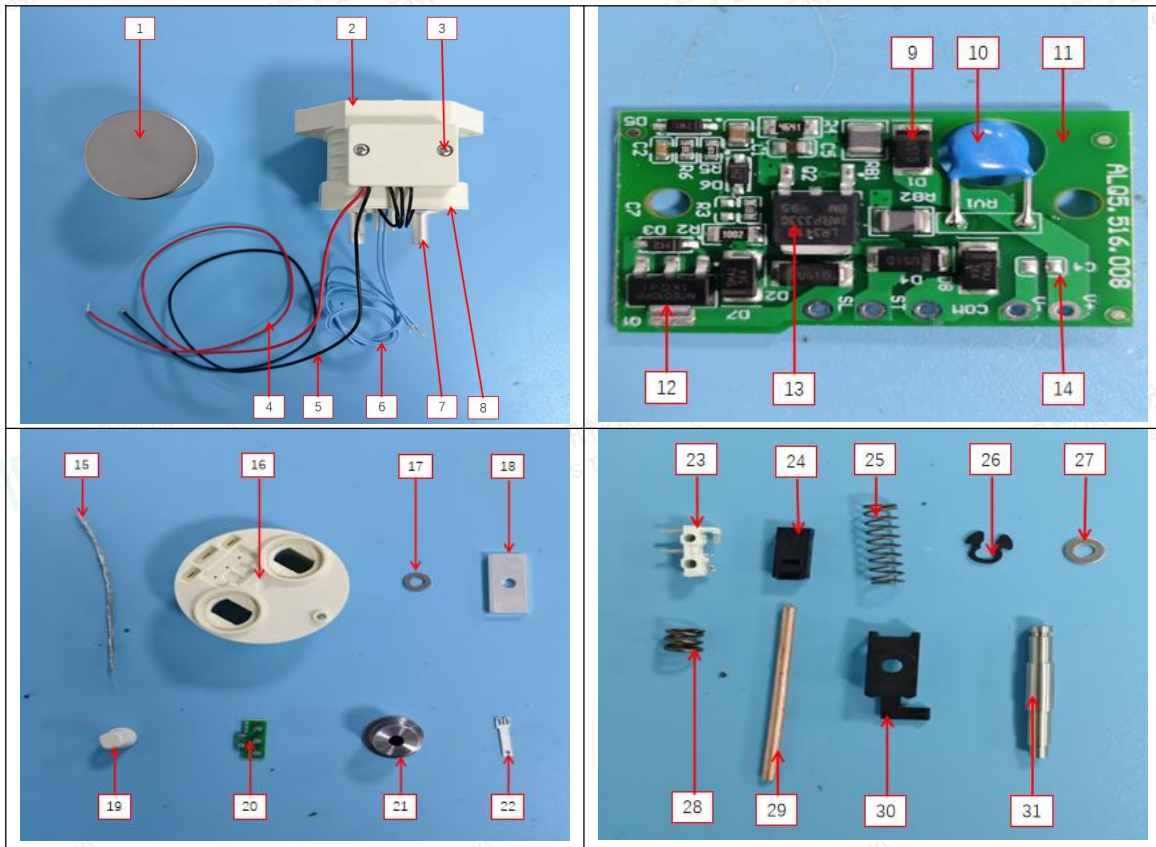
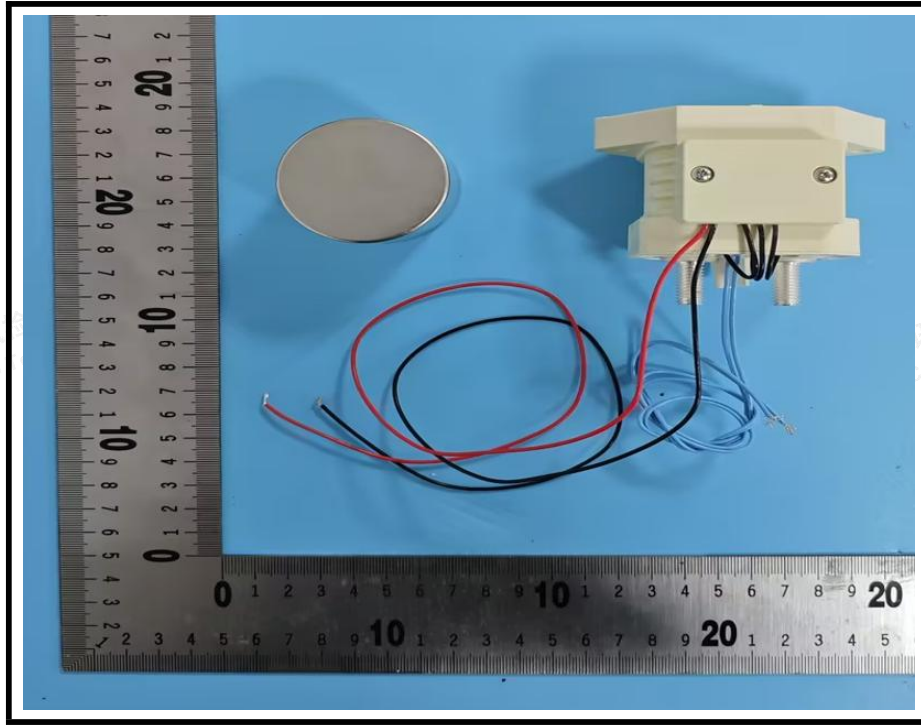


5. Phthalates(DBP, BBP, DEHP&DIBP): IEC 62321-8:2017 邻苯二甲酸酯(DBP, BBP, DEHP 和 DIBP): IEC 62321-8:2017





The photo(s) of the sample 样品图片

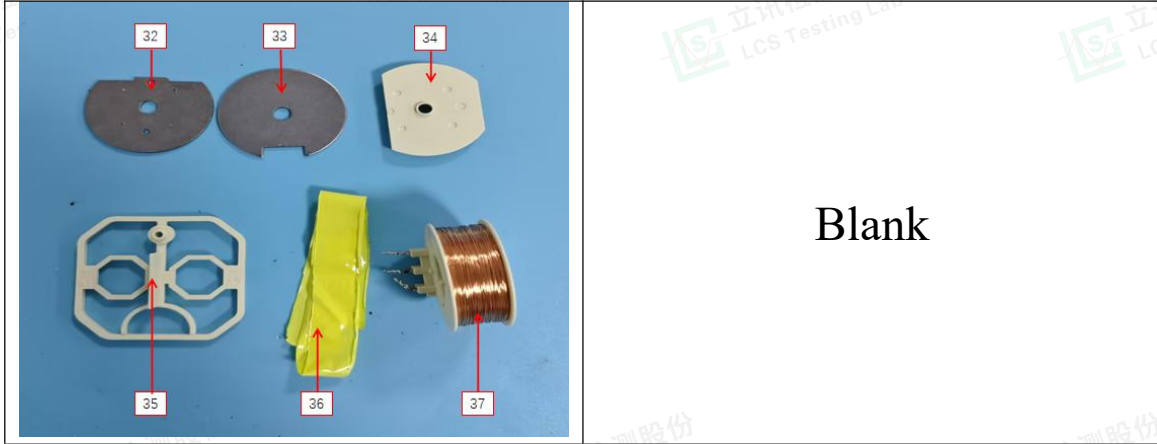


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*** End of Report ***

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