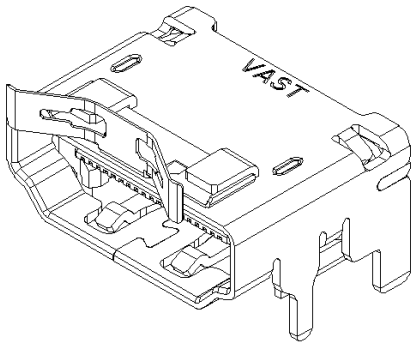
东莞市广业电子有限公司

Dongguan Vast Electronics Co.,Ltd

Approval Sheet

客户 **Customer**	钰纬科技	
客户料号 **Customer PN**		
广业料号 **Vast PN**	161012182	
品名 **Description**	HDMI SOCKET R/A SMT 19PIN WITH SHRAPNEL	
日期 **Date**	2024-08-16	

Approval

CUSTOMER	**Prepare**	**Review**	**Approval**
VAST	**Prepare**	**Review**	**Approval**
	ZhaoXueqin	**/**	**DengXikun**

Company:东莞市广业电子有限公司(Dongguan Vast Electronics Co., Ltd)

Address:广东省东莞市虎门镇捷南路 881 号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province
TEL:0769-38933333 **FAX:0769-38932500**
Http://www.vast.hk

--Contents--

1.Cover----------1

2.Contents----------2

3.Record of Revision----------3

4.Drawing----------4

5.FAI----------5

6.Packing ----------6

7.Specification----------7-14

8.Test report----------15-48

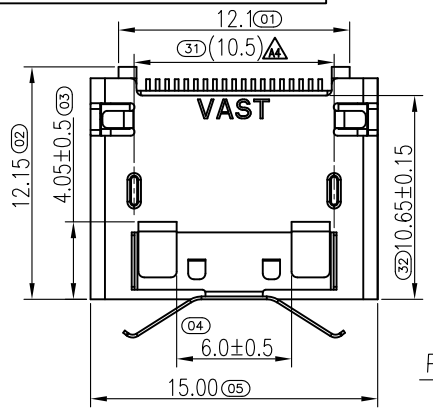
9.SGS----------49-107

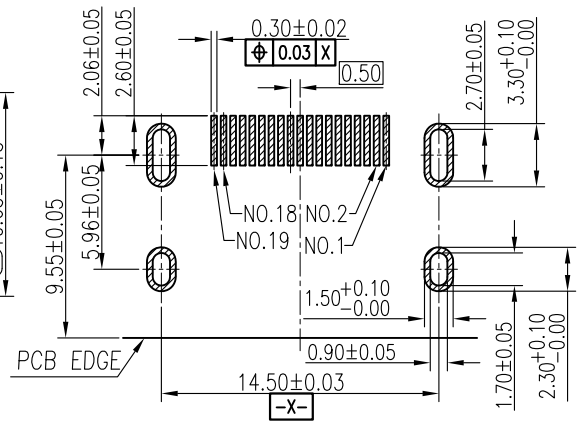
文件制定&修改履历表
(Document formulation/Modify resume)

版本 Version	日期 Date	制定/修改/废止内容 Formulate/Modification/Abolition of the content	制定 Prepare	核准 Approval
A0	16/Aug/24	NEW RELEASE	ZhaoXueqin	DengXikun

保密等级: ☐ 绝密 ■ 保密 ☐ 普通

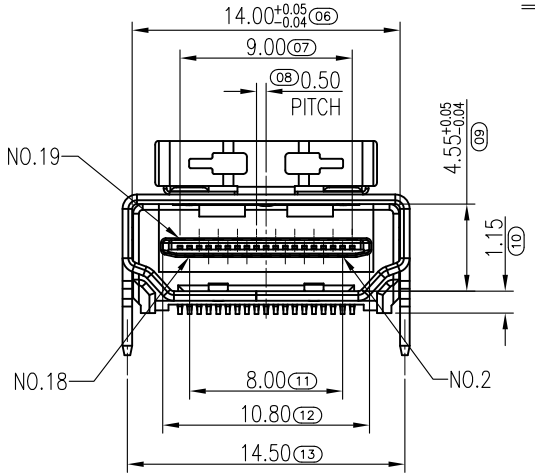
REV.	EC#	DESCRIPTION	DATE	DRAWING	CHECKED	APPROVED
A1	ECN-160032	NEW RELEASE	2016.01.19	LEIPENG	YINWANG	NICO.LI
A2	ECN-160078	更正包规&载带增加加强筋 A2 *3	2016.02.26	LEIPENG	YINWANG	NICO.LI
A3	ECN-160158	修订电镀规格 A3 *3	2016.03.21	LEIPENG	YINWANG	NICO.LI
A4	ECN-220313	外壳上增加凸筋 A4 *3	2021.12.14	DENGXIKUN	BEN	BEN

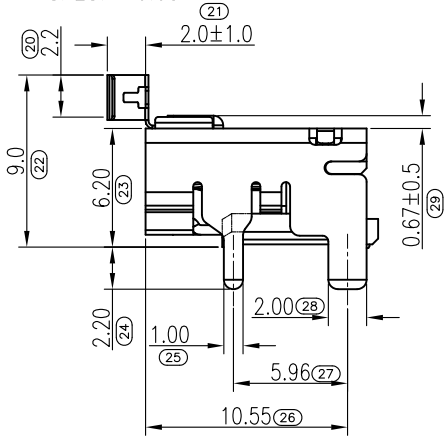


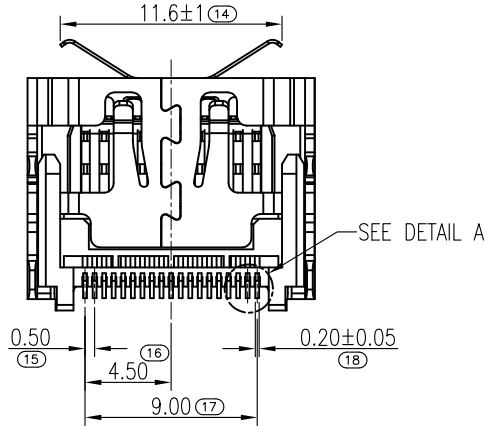


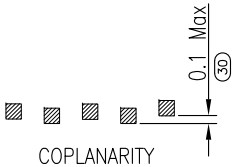
RECOMMENDED PCB LAYOUT (T=1.60)

TOLERANCES UNLESS OTHERWISE SPEC. ±0.05

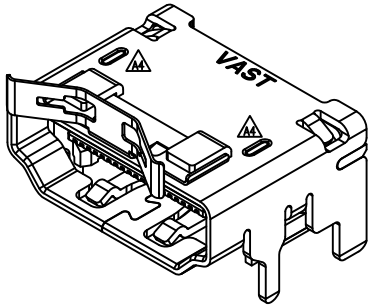


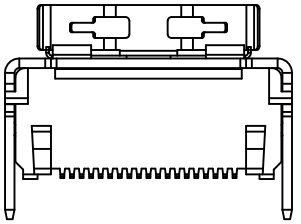


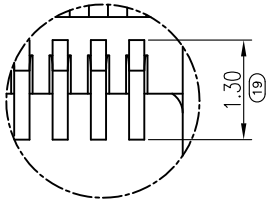




COPLANARITY







DETAIL A

SCALE 4:1

NOTE:

1. MATERIAL:
   - 1-1 PLASTIC: HIGH TEMPERATURE PLASTIC UL94V-0, COLOR:BLACK
   - 1-2 CONTACT: COPPER ALLOY
   - 1-3 SHELL: COPPER ALLOY
   - 1-4 SHRAPNEL: STAINLESS
2. PLATING :
   - TERMINAL:
     - CONTACT AREA: GOLD FLASH PLATING. A3
     - SOLDER AREA: MATTE TIN ALLOY PLATED.
     - UNDER PLATE: NICKEL PLATING.
   - SHELL: NICKEL PLATED OVERALL .
3. MECHANICAL
   - INSERTION FORCE: 4.5kgf MAX
   - WITHDRAWAL FORCE: 1.0~4.0kgf
4. ELECTRICAL:
   - LOW LEVEL CONTACT RESISTANCE: CONTACT: INITIAL CONTACT RESISTANCE EXCLUDING CONDUCTOR RESISTANCE 10 MILLIOHMS MAXIMUM. (THE INITIAL CONTACT IMPEDANCE INCLUDESA CONDUCTOR IMPEDANCE OF 30 MILLIOHMS MAXIMUM)
   - DIELECTRIC WITHSTANDING VOLTAGE: 500V AC
   - INSULATION RESISTANCE: 100 MEGAOHMS MIN AT 500V DC(UNMATED) 10 MEGAOHMS MIN AT 150V DC(MATED)
5. ENVIRONMENTAL
   - TEMPERATRUE RANGE: -25°C TO +85°C.
6. PART MUST COMPLY RoHS & HF SPECIFICATION

RoHS

HF

MILLIMETERS	INCH
X° ± 2°	X° ± 2°
.X ±0.30	.XX ±0.012
.XX ±0.20	.XXX ±0.008
.XXX± 0.10	.XXXX± 0.004

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF Dongguan Vast Electronics Co., Ltd COPIED OR USED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF Dongguan Vast Electronics Co., Ltd

UNITS MM

MAT'L SEE NOTES

FINISH SEE NOTES

QTY SEE NOTES

Dongguan Vast Electronics Co., Ltd

PART NUMBER: 161012182

TITLE: HDMI SOCKET R/A SMT 19PIN WITH SHRAPNEL,SHELL DIP, CUSTOMER DWG

APPD: Ben

CHKD: Ben

DR: DengXiKun

DWG NO.: C-161012182-00

SCALE	SHEET	REV.
1:1	1/2	A4

Dongguan Vast Electronics Co.,Ltd

Construction & Dimension Test report

A/0 No.: 1 of 1

Product Name:HDMI Model specifications: 161012182 The number of samples:5

Acceptance time: ■New mode ☐ Design changes ☐ Repair mode ☐ Product testing

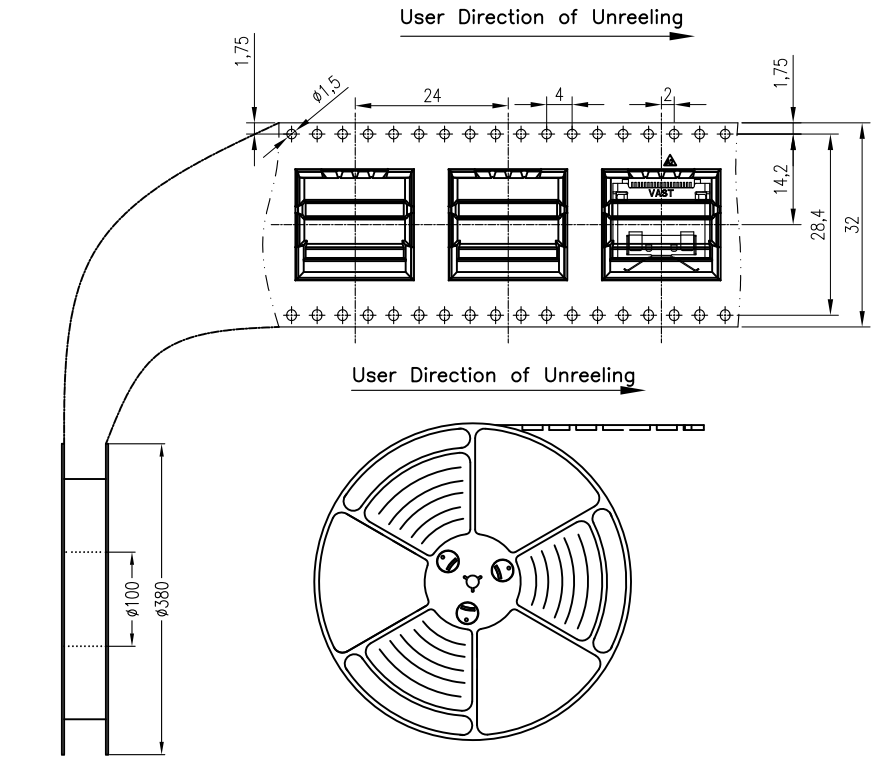
Serial number	Sample No. / Serial number / Specifications(mm)	1	2	3	4	5		Measurement Tools	Test results
1	12.1±0.30	12.151	12.107	12.139	12.142	12.146		B	OK
2	12.15±0.20	12.103	12.105	12.174	12.188	12.184		B	OK
3	4.05±0.5	4.085	4.062	4.081	4.023	4.031		B	OK
4	6.0±0.5	6.062	6.051	6.043	6.007	6.023		B	OK
5	15.00±0.20	15.034	15.044	15.036	15.029	15.005		B	OK
6	14.00+0.05/-0.04	14.026	14.033	13.987	13.991	13.979		B	OK
7	9.00±0.20	9.038	9.036	9.032	9.044	9.037		B	OK
8	0.50±0.20	0.527	0.518	0.525	0.486	0.482		B	OK
9	4.55+0.05/-0.04	4.579	4.569	4.558	4.535	4.548		B	OK
10	1.15±0.20	1.171	1.185	1.156	1.132	1.141		B	OK
11	8.00±0.20	8.035	8.042	8.049	8.028	8.036		B	OK
12	10.80±0.20	10.833	10.827	10.831	10.777	10.784		B	OK
13	14.50±0.20	14.534	14.531	14.467	14.481	14.529		B	OK
14	11.6±1	11.652	11.663	11.554	11.633	11.547		B	OK
15	0.50±0.20	0.521	0.518	0.482	0.479	0.523		B	OK
16	4.50±0.20	4.536	4.474	4.535	4.536	4.481		B	OK
17	9.00±0.20	9.038	9.036	8.961	8.974	8.992		B	OK
18	0.20±0.05	0.217	0.221	0.189	0.185	0.216		B	OK
19	1.30±0.20	1.323	1.332	1.288	1.278	1.285		B	OK
20	2.2±0.30	2.234	2.235	2.187	2.172	2.238		B	OK
21	2.0±1.0	2.045	2.036	2.033	2.027	2.031		B	OK
22	9.0±0.30	9.032	9.028	9.041	9.035	9.034		B	OK
23	6.20±0.20	6.167	6.173	6.225	6.231	6.237		B	OK
24	2.20±0.20	2.224	2.237	2.168	2.174	2.179		B	OK
25	1.00±0.20	1.038	1.029	1.022	0.983	0.978		B	OK
26	10.55±0.20	10.581	10.575	10.519	10.518	10.506		B	OK
27	5.96±0.20	6.007	6.013	5.996	5.921	5.913		B	OK
28	2.00±0.20	2.025	2.031	2.033	1.967	1.981		B	OK
29	0.67±0.5	0.692	0.704	0.644	0.652	0.644		B	OK
30	0.1Max	0.031	0.029	0.041	0.036	0.028		B	OK
31	10.5±0.30	10.526	10.546	10.475	10.479	10.462		B	OK
32	10.65±0.15	10.693	10.687	10.602	10.605	10.617		B	OK

Instrument code: A : projector (投 影 机) B : secondary element (二 次 元)
C: vernier caliper (游标)

Remarks:

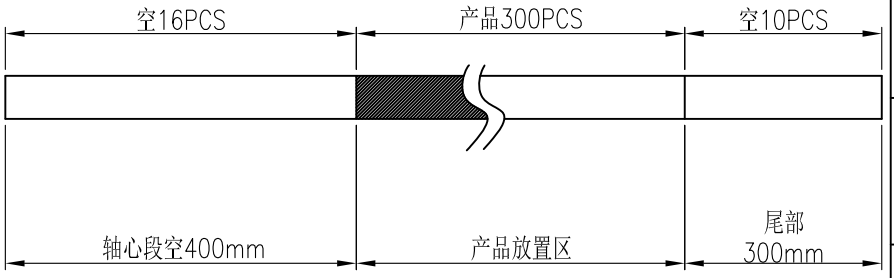
Test:ZhaoXueqin Check:DengXikun

保密等级：☐ 绝密 ■ 保密 ☐ 普通

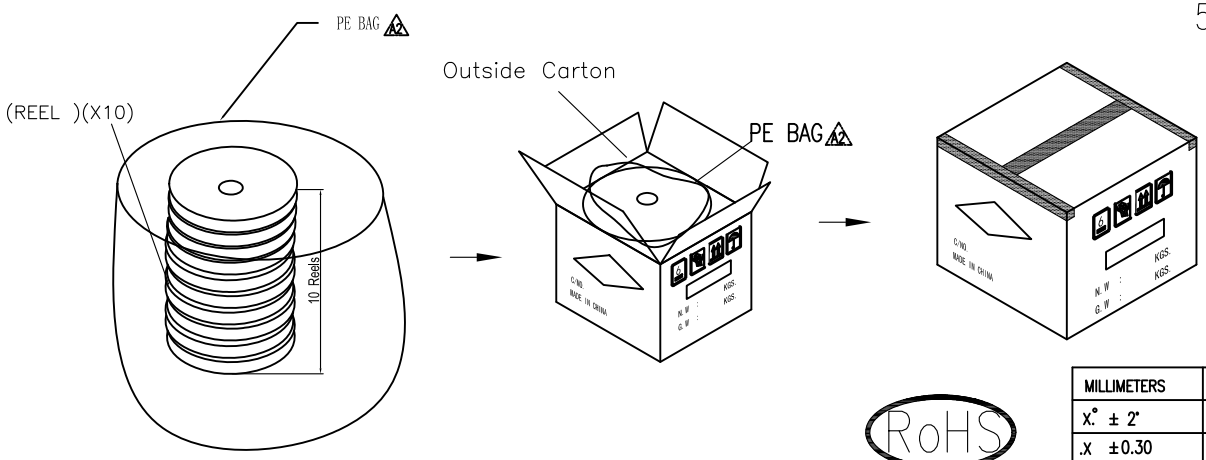


NOTES

1. 每卷包装数量:300PCS/每卷
2. 卷带包装方式：



3. 每箱包装数量:3000PCS/箱
4. 重量 ：
   - 4.1 净重 ： 6.00Kg/Box,2.00g/PCS
   - 4.2 毛重 ： 13.10Kg/Box.
5. **载料带** 颜色：黑色



RoHS

HF

MILLIMETERS	INCH
X.° ± 2°	X.° ± 2°
.X ±0.30	.XX ±0.012
.XX ±0.20	.XXX ±0.008
.XXX± 0.10	.XXXX± 0.004

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF Dongguan Vast Electronics Co., Ltd COPIED OR USED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF Dongguan Vast Electronics Co., Ltd

UNITS MM

MAT'L SEE NOTES

FINISH SEE NOTES

QTY SEE NOTES

Dongguan Vast Electronics Co., Ltd

PART NUMBER: 161012182

TITLE: HDMI SOCKET R/A SMT 19PIN WITH SHRAPNEL,SHELL DIP, CUSTOMER DWG

APPD: Ben

CHKD: Ben

DR: DengXiKun

DWG NO.: C-161012182-00

SCALE	SHEET	REV.
1:1	2/2	A4

1. Scope(范围)

1.1 Contents（内容）

This specification covers the performance, tests and quality requirements for the Vast Electronics HDMI Connector.

（此份产品规格适用于广业电子 HDMI 连接器的产品功能，测试方法及质量要求）

2. Requirements（要求）:

2.1 Rating(额定条件)

A .Voltage rating (额定电压) ： 40V AC

B. Current rating (额定电流) ： 0.5A

C. Operation Temperature Range(操作温度范围)：-25℃ to +85 ℃.

D. Storage Temperature Range（储存温度范围）：-20℃ to +60 ℃.

3. Test Condition(测试条件):

3.1 Temperature range（温度范围）：22±2℃

3.2 Humidity range（湿度范围）:58±3%

4 .Test Methods and Requirements: (测试方法及要求)

4.1 Examination of product (产品外观)

Test items		Test Conditions	Requirement
4.1.1	Examinatio Of Product 产品外观	Visual 目视	No peeling off the plating, deformation of the base or damage. 不得有电镀层剥落,塑料变形或破损
4.2.Electrical Performance (电气性能)			
4.2.1	Contact Resistance 接触阻抗	(EIA -364-06B) Mated connectors, Contact: measure by dry circuit, 20 mVolts maximum, 10 mA. Shell: measure by open circuit, 5 Volts maximum, 100 mA. 配对的连接器， 端子:测试端子在回路中施加直流最大 20mV 10 mA 的电流再测端子的电阻值 外壳:测试外壳在开路中施加直流最大 5V 100 mA 的电流再测外壳的电阻值	Initial Contact resistance （Excluding conductor Resistance） 10 milliohms maximum. (The initial contact impedance includesa conductor impedance of 30 milliohms maximum) 接触电阻初始值（初始接触阻抗不包含导体阻抗）最大不能超过 10 mΩ (初始接触阻抗包含导体阻抗最大不能超过 30 mΩ)
4.2.2	Dielectric Withstanding Voltage 耐电压	(EIA -364-20C) Unmated connectors, apply Type A/B/C/E：500V AC (RMS.) Type D：250V AC (RMS.) for 1 minute between adjacent terminal or ground. Mated connectors, apply Type A/B/C/E：300V AC (RMS.) Type D：150V AC (RMS.) for 1 minute between adjacent terminal or ground. 没有配对的连接器在相邻的端子或接地之间通电：Type A/B/C/E 500V，Type D 250V 的交流电压 1 分钟 配对的连接器在相邻的端子或接地之间通电：Type A/B/C/E 300V，Type D 150V 的交流电压 1 分钟	No Breakdown or flashover 不能有损坏或跳火花

4.2.3	Insulation Resistance 绝缘阻抗	(EIA 364-21C) Unmated connectors, apply 500 V DC between adjacent terminal or ground. Mated connectors, apply 150 V DC between adjacent terminal or ground. 没有配对的连接器在相邻的端子或接地之间通上 500V 的直流电压 1 分钟 配对的连接器在相邻的端子或接地之间通上 150V 的直流电压 1 分钟	100 MΩ min(unmated) 10 MΩ min(mated) 没有配对需大于 100 MΩ 配对需大于 10 MΩ	
4.3.Mechanical Performance (机械性能)				
4.3.1	Insertion/ Withdrawal force 插入力/拔出力	(EIA-364-13) Insertion and withdrawal speed: 25mm/minute. 插入和拔出的速度为 25mm/分	insertion force 插入力	4.5kgf MAX
			Withdrawal force 拔出力	Type A：1.0-4.0kgf Type C:0.7-2.5kgf Type D:0.5-2.5kgf and after 5,000 cycles mating, 0.3-2.5kgf
4.3.2	Durability 寿命测试	(EIA -364-09) Measure contact and shell resistance after the Following. Automatic cycling:10000 cycles at 100±50 Cycles per hour. Type C and Type D: 5,000 cycles at 100 ± 50 cycles per hour 以每小时 100±50 的插拔次数测试 10000 次循环后量测端子和外壳的接触阻抗 Type C 和 Type D 以每小时 100±50 的插拔次数测试 5000 次循环后量测端子和外壳的接触阻抗	Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于 30mΩ 外壳:从初始值开始变化量小于 50mΩ	

4.3.3	Terminal retention force 端子保持力	Apply axial pull out force on terminal in the housing at a rate of 25.4±3mm per minute 拉伸的速度应该在每分钟 25.4±3mm 之间	Minimum retention force 3.92N (0.4kgf)/PIN 端子保持力不小于 3.92N(0.4kgf) （此项测试仅适用于插 pin 结构）
4.3.4	Vibration 振动	(EIA-364-28 条件 3) Amplitude:1.52mm P-P or 147m/s² {15G} Sweep time:50-2000-50Hz in 20 minutes. Duration:12 times in each(total of 36 times)X, Y, Z, axes. Electrical load:DC100mA current shall be flowed during the test.(ANSI/EIA-364-28 Condition III) 在直流 100 毫安通电状态下测试，在 X，Y，Z 垂直 3 方向上，频率 50-2000-50 赫兹（加速度往复 20 分钟），全振幅 1.52mm P-P 或 147 m/ s² {15G}，每轴 12 回计 36 回	Appearance ： No Damage 外观：无损坏 Contact Resistance 接触阻抗 Contact：Change from initial value:30mΩMax. 端子：从初始值开始变化量小于 30 mΩ Shell Part: Change from initial value:50mΩMax. 外壳：从初始值开始变化量小于 50 mΩ Discontinuity：1 μsec Max. 间断性：不超过 1 微秒
4.3.5	Physical shock 物理冲击	(EIA-364-27 条件 A) Pusle width:11msec Waveform: Half-sine 490 m/ s²(50G)3 strokes in each X,Y ,Z axes. (ANSI/EIA-364-27 condition A) 周期：11msec 冲击波形：正弦半波 490 m/ s²(50G)3 循环在 X，Y，Z 轴	Appearance ： No Damage 外观：无损坏 Contact Resistance 接触阻抗 Contact：Change from initial value:30mΩMax. 端子：从初始值开始变化量小于 30 mΩ Shell Part: Change from initial value:50mΩMax. 外壳：从初始值开始变化量小于 50 mΩ Discontinuity：1 μsec Max. 间断性：不超过 1 微秒

4.4.Environmental Performance			
4.4.1	Thermal shock test 冷热冲击	(EIA-364-32C Condition 1) 10 cycles of: a) -55±3°C for 30 minutes b) +85±3°C for 30 minutes 10个循环， a) -55±3°C 30 分钟 b) +85±3°C 30 分钟	Appearance : No Damage. 外观：没有损坏 Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于30mΩ 外壳:从初始值开始变化量小于50mΩ
4.4.2	Solder ability 焊锡性	(EIA -364-52) To be sipped in the solder bath 245±5℃ for 3-5 seconds. 将焊锡脚浸在 245℃ ± 5℃的锡炉中 3-5 秒	The inspected area of each lead must have 95% solder coverage minimum 表面粘锡面积不少于 95%
4.4.3	Humidity 恒温恒湿	(EIA- 364-31B) (A) Mate connectors together and perform the test as follows 配对的连接器测试条件. Temperature: +25 to +85 ℃（温度：+25 to +85 ℃） Relative Humidity: 80 to 95%(相对湿度：80 to 95%), Duration: 4 cycles(96 hours) 时间：4 个循环共 96 小时 Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed. 实验完成后,样品放置于室温条件中 24 小时后再进行测试	Appearance : No Damage. 外观：没有损坏 Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于30mΩ 外壳:从初始值开始变化量小于50mΩ
		(EIA- 364-31B) (B) Unmated each connectors and perform the test as follows. 没有配对的连接器测试条件. Temperature: +25 to +85℃（温度：+25 to +85 ℃） Relative Humidity: 80 to 95%(相对湿度：80 to 95%) Duration: 4 cycles(96 hours) 时间：4 个循环共 96 小时 Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed. 实验完成后,样品放置于室温条件中 24 小时后再进行测试	Appearance : No Damage. 外观：没有损坏 Conform to item of Dielectric Withstanding Voltage and Insulation Resistance. 符合耐电压及绝缘阻抗要求

4.4.4	Salt Spray 盐水喷雾	(EIA -364-26B) Temperature: 35+/-2 ℃ 温度: 35+/-2 ℃ Concentration for salt : 5% 盐水浓度: 5% (1)Duration: 48H 持续时间: 48 小时 Condition(条件): Contact plated gold more than 15u”(include 15u”),and the material of shell for copper alloy， or stainless . 端子镀金厚度大于等于 15u”且壳体材质是铜合金或是不锈钢. (2)Duration: 24H 持续时间: 24 小时 Condition: Contact plated gold less than 15u”,and/or the material of shell for steel. 端子镀金厚度小于 15u”且/或是壳体材质是铁材	No detrimental corrosion(Terminal solder tail unrequested) 产品无氧化,锈蚀(端子焊脚镀锡处不作要求) Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于 30mΩ 外壳:从初始值开始变化量小于 50mΩ
4.4.5	Cold resistance (Unmated) 耐寒性	(JIS C 0020) Unmated connectors and expose to -40℃+/-3℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 没配对的连接器放置于-40℃+/-3℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Contact resistance: 接触阻抗 Contact: change from initial value 30mΩMax. Shell: change from initial value 50mΩMax. Appearance: No damage. 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 外观：无损坏
4.4.6	Heat resistance (Unmated) 耐热性	(EIA-364-17B) Unmated connectors and expose to 85℃+/-2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 没配对的连接器放置于 85℃+/-2℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Contact resistance: 接触阻抗 Contact: change from initial value 30 mΩMax. Shell: change from initial value 50 mΩMax. Appearance: No damage. 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 外观：无损坏

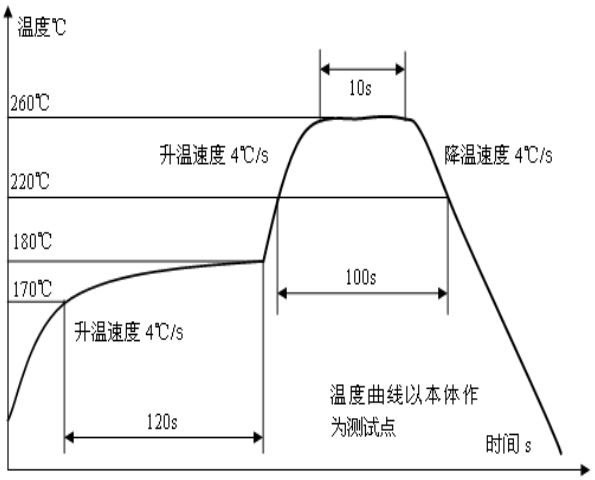
4.4.7	Thermal Aging 高温老化	（EIA-364-17B，Condition4，Method A） Mate connector and expose to +105±2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditional at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 配对的连接器放置于 105±2℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Appearance： No Damage 外观：无损坏 Contact Resistance 接触阻抗 Contact: change from initial value 30 mΩMax.端子：从初始值开始变化量小于 30 mΩ Shell: change from initial value 50 mΩMax.外壳：从初始值开始变化量小于 50 mΩ
4.4.8	IR-reflow 回流焊测试	Solder Temp.：260±5℃, 10±0.5sec. 焊锡温度：260±5℃, 10±0.5sec.  	No physical damage shall occur. 不可有损坏

Figure 1

Note1：Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

说明一：测试要求不能有物理损坏，测试依据表格二的顺序进行。

3. PRODUCT QUALIFICATION AND REQUALIFICATION TEST：产品测试顺序表 Figure 2

Test or Examination	Test Group													
	A	E	F	G	H	I	J	K	L					
	Test Sequence													
4.1.1.Examination of Product 产品外观	**1,6**	**1,5**	**1,3**	**1,9**	**1,5**	**1,5**	**1,5**	**1,5**	**1,3**					
4.2.1.Contact Resistance 接触阻抗	**2,5**	**2,4**		**2,8**	**2,4**	**2,4**	**2,4**	**2,4**						
4.2.2.Dielectric Withstanding Voltage 耐电压				**3,7**										
4.2.3.Insulation Resistance 绝缘阻抗				**4,6**										
4.3.1Insertion / Withdrawal force 插拔力	**3**													
4.3.2.Durability 寿命测试	**4**													
4.4.1.Thermal shock test 冷热冲击		**3**												
4.4.2.Solderability 焊锡性			**2**											
4.4.3.Humidity 恒温恒湿				**5**										
4.4.4.Salt Spray 盐水喷雾					**3**									
4.4.5.Cold resistance 耐寒性						**3**								
4.4.6.Heat resistance 耐热性							**3**							
4.4.7.Thermal Aging 高温老化								**3**						
4.4.8. IR-reflow 回流焊测试									**2**					
No. of Test Samples (Min.) 测试样品数量（最少）	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**					

NOTE 2：（a）Numbers indicate sequence in which tests are performed.

（b）Discontinuities shall not take place in this test group, during tests.

说明二：（a）测试依照矩阵要求数量进行测试

（b）在测试中，群组测试不能间断.

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-A
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group A	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Mating & Unmating force	automatic push/pull test machine	1220S	2025/3/17
Durability test	automatic push/pull test machine	1220S	2025/3/17

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Mating & Unmating force	Test speed 25mm/minutes (Reference:EIA-364-13C)	Before: Mating force:4.5Kgf Max Un-mating force:1.0~4.0Kgf After 5000Cycles: Mating force:4.5Kgf Max Un-mating force:0.3~2.5Kgf
Durability test	10000 insertion/extraction cycles at cycle rate of 100 cycles per hour (Reference:EIA-364-09C)	1.Appearance:No physical damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

2.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	2.64	6.87	2.80	5.80	3.50
	2	2.39	3.06	3.25	4.09	6.29
	3	4.75	3.20	2.83	6.56	6.82
	4	6.09	4.23	3.43	5.07	4.76
	5	3.70	6.49	4.28	6.91	4.00
	6	2.58	4.99	4.52	5.17	5.82
	7	6.05	5.08	4.70	3.87	5.12
	8	4.00	6.09	2.29	5.63	4.82
	9	4.42	5.23	2.83	6.20	2.40
10Pin	1	3.92	5.77	4.32	4.45	2.68
	2	6.70	6.60	4.27	4.73	4.91
	3	2.65	6.09	2.67	4.52	5.47
	4	5.57	6.99	4.97	4.88	5.04
	5	3.88	2.20	6.92	4.70	4.03
	6	4.83	6.05	4.90	6.24	4.67
	7	5.47	2.43	5.66	4.40	5.49
	8	5.01	2.03	4.74	5.59	2.42
	9	4.47	4.60	5.03	6.17	6.06
	10	5.08	4.99	3.13	5.16	6.99
Shell		2.26	3.47	3.94	3.37	3.35
Result		Pass	Pass	Pass	Pass	Pass

3.Mating & Unmating force(Unit:Kgf)

Item \ Sample	No.1	No.2	No.3	No.4	No.5	Remark
Mating force	1.93	1.88	1.28	1.34	1.21	Before
Un-mating force	1.89	1.90	1.77	1.03	1.99	
Mating force	1.62	1.74	1.40	1.18	1.47	After 5000Cycles
Un-mating force	1.96	1.05	1.50	1.19	1.11	
Result	Pass	Pass	Pass	Pass	Pass	/

4.After Durability test 10000Cycles

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

5.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	3.22	2.64	4.49	4.82	5.23
	2	2.50	6.49	5.07	5.82	6.65
	3	4.70	2.85	4.49	4.46	3.82
	4	3.95	2.20	6.63	6.23	4.99
	5	5.03	5.32	3.36	2.52	6.51
	6	5.31	4.32	5.68	2.41	2.30
	7	4.40	4.92	4.46	2.98	2.13
	8	2.35	5.71	6.28	5.42	3.93
	9	4.69	4.88	6.85	4.46	3.69
10Pin	1	5.00	5.44	4.75	4.00	6.68
	2	6.18	2.41	6.57	3.86	3.17
	3	6.60	3.88	4.21	2.07	2.34
	4	6.85	6.34	3.57	4.42	2.85
	5	6.58	4.37	2.70	4.07	6.84
	6	6.52	2.17	3.49	6.23	2.68
	7	5.70	2.48	2.14	6.58	2.85
	8	5.80	2.43	3.26	3.05	6.17
	9	4.45	4.10	5.87	4.34	5.99
	10	4.15	6.25	5.41	4.27	2.11
Shell		3.31	3.52	3.46	3.76	3.28
Result		Pass	Pass	Pass	Pass	Pass

6.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	0.58	4.23	1.69	0.98	1.73
	2	0.11	3.43	1.82	1.73	0.36
	3	0.05	0.35	1.66	2.10	3.00
	4	2.14	2.03	3.20	1.16	0.23
	5	1.33	1.17	0.92	4.39	2.51
	6	2.73	0.67	1.16	2.76	3.52
	7	1.65	0.16	0.24	0.89	2.99
	8	1.65	0.38	3.99	0.21	0.89
	9	0.27	0.35	4.02	1.74	1.29
10Pin	1	1.08	0.33	0.43	0.45	4.00
	2	0.52	4.19	2.30	0.87	1.74

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	3	3.95	2.21	1.54	2.45	3.13
	4	1.28	0.65	1.40	0.46	2.19
	5	2.70	2.17	4.22	0.63	2.81
	6	1.69	3.88	1.41	0.01	1.99
	7	0.23	0.05	3.52	2.18	2.64
	8	0.79	0.40	1.48	2.54	3.75
	9	0.02	0.50	0.84	1.83	0.07
	10	0.93	1.26	2.28	0.89	4.88
Shell		1.05	0.05	0.48	0.39	0.07
Result		Pass	Pass	Pass	Pass	Pass

7. Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-E
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group E	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Thermal Shock test	Cold and hot impact testing	H-TS-80Z	2025/7/18

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Thermal Shock test	Subject Unmated connectors should be tested according to the condition listed below ; Temperature:-55℃~+85℃;Time:10 cycles ,70minute per cycle (Reference:EIA-364-32C)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	3.72	4.97	4.29	3.63	4.08
	2	2.94	6.31	6.67	2.10	5.35
	3	3.36	2.70	6.11	5.66	4.26
	4	3.81	2.30	5.73	5.79	2.24
	5	5.65	6.48	6.82	6.77	5.50
	6	2.54	5.73	5.57	3.56	2.70

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	7	6.80	3.80	5.21	6.16	2.16
	8	2.03	2.30	2.55	2.32	4.40
	9	2.01	2.07	3.90	3.40	3.87
10Pin	1	2.20	5.27	4.22	5.50	5.95
	2	5.38	3.44	5.30	4.58	4.84
	3	5.08	6.45	3.00	5.99	2.42
	4	6.61	6.41	2.41	3.04	2.36
	5	2.58	5.45	3.57	2.43	4.10
	6	2.63	5.93	6.12	3.52	6.03
	7	3.23	3.52	5.11	6.10	4.98
	8	5.96	3.18	6.13	5.06	5.22
	9	4.99	5.28	6.05	5.12	3.92
	10	4.36	5.99	5.96	3.69	3.87
Shell		3.02	3.74	2.02	3.55	3.26
Result		Pass	Pass	Pass	Pass	Pass

3.After Thermal Shock test

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	4.63	6.78	5.28	5.25	6.49
	2	5.41	5.14	3.64	4.31	3.89
	3	4.43	4.70	6.47	6.01	5.86
	4	6.69	2.54	6.46	2.88	3.49
	5	4.51	3.64	5.64	5.41	6.01
	6	5.17	6.08	4.36	3.79	5.21
	7	3.49	5.53	2.45	3.83	5.97
	8	2.62	3.38	3.19	2.32	4.76
	9	5.04	4.86	4.83	2.17	5.08
10Pin	1	3.02	3.06	5.26	3.88	3.59
	2	5.36	5.10	2.32	3.65	4.39
	3	3.27	3.83	4.81	5.74	6.37
	4	5.18	6.09	4.92	3.96	3.94

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	5	4.63	3.07	5.45	5.15	3.46
	6	5.80	3.64	3.72	3.14	2.96
	7	4.42	3.14	2.42	4.52	6.45
	8	6.34	2.62	3.95	3.86	4.58
	9	4.61	2.95	6.13	5.45	6.16
	10	3.92	2.72	6.41	5.10	6.61
Shell		2.72	2.15	2.18	3.97	3.79
Result		Pass	Pass	Pass	Pass	Pass

5.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	0.91	1.81	0.99	1.62	2.41
	2	2.47	1.17	3.03	2.21	1.46
	3	1.07	2.00	0.36	0.35	1.60
	4	2.88	0.24	0.73	2.91	1.25
	5	1.14	2.84	1.18	1.36	0.51
	6	2.63	0.35	1.21	0.23	2.51
	7	3.31	1.73	2.76	2.33	3.81
	8	0.59	1.08	0.64	0.00	0.36
	9	3.03	2.79	0.93	1.23	1.21
10Pin	1	0.82	2.21	1.04	1.62	2.36
	2	0.02	1.66	2.98	0.93	0.45
	3	1.81	2.62	1.81	0.25	3.95
	4	1.43	0.32	2.51	0.92	1.58
	5	2.05	2.38	1.88	2.72	0.64
	6	3.17	2.29	2.40	0.38	3.07
	7	1.19	0.38	2.69	1.58	1.47
	8	0.38	0.56	2.18	1.20	0.64
	9	0.38	2.33	0.08	0.33	2.24
	10	0.44	3.27	0.45	1.41	2.74
Shell		0.30	1.59	0.16	0.42	0.53
Result		Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-F
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group F	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Solderability test	Soldering Oven	ETS.MC0.5-5.0	/

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Solderability test	Soldering Temperature:245±5℃,Soldering Time: 3~5 seconds (Reference:J-STD-002D-2013)	Continuous solder coating with a minimum 95% coverage

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Solderability test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

3.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-G
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group G	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继伦

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Hi-Pot	Hi-Pot tester	LK2670A	2025/5/5
Insulation resistance	Insulation tester	CC7112	2025/5/5
Temperature and Humidity Cycle	Programmble constant Temperature and Humidity machine	GTTH-408-60-1P	2025/7/18

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Humidity test	Subject Unmated connector to 96hours(4 Complete Cycles,Reference:EIA-364-31B test condition A method III)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;
Hi-Pot	Test voltage 500V AC,test time 60sec (Reference:EIA-364-20B)	No voltage breakdown, Current leakage<0.5mA
Insulation resistance	Test voltage 500V DC, Test time 1 Minutes (Reference:EIA-364-21B) .	Insulation resistance≥100 MΩ

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

廣業電子 VAST ELECTRONICS

检 测 报 告
Test Report

2.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	4.48	4.51	5.49	3.05	6.43
	2	3.36	5.06	6.59	2.38	5.94
	3	3.72	4.50	5.66	2.05	2.93
	4	5.60	3.75	6.37	2.46	2.89
	5	2.33	3.49	3.33	6.29	5.09
	6	3.59	5.17	2.80	2.20	6.34
	7	4.58	5.88	2.91	6.06	4.34
	8	4.05	3.70	2.13	6.58	2.06
	9	6.80	5.39	2.08	6.10	3.07
10Pin	1	6.69	3.78	4.74	4.68	5.48
	2	2.98	6.08	2.13	2.96	5.77
	3	3.24	3.52	6.52	3.07	6.54
	4	6.96	4.12	3.73	2.84	4.91
	5	5.26	6.19	6.59	5.51	2.28
	6	3.50	4.65	2.55	6.76	5.25
	7	6.70	6.23	3.12	6.70	2.35
	8	4.06	4.78	4.24	3.99	3.18
	9	5.85	6.11	4.42	2.01	6.57
	10	4.29	5.59	3.36	2.47	2.34
Shell		3.65	3.68	3.15	3.59	3.45
Result		Pass	Pass	Pass	Pass	Pass

3.Hi-Pot test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Insulation resistance test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥100	≥100	≥100	≥100	≥100
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

5.After Humidity test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

6.Insulation resistance test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥100	≥100	≥100	≥100	≥100
Result	Pass	Pass	Pass	Pass	Pass

7.Hi-Pot test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

8.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	5.71	2.32	5.45	5.29	6.16
	2	4.59	5.87	3.46	2.08	6.62
	3	3.56	5.82	2.34	5.47	2.16
	4	5.27	6.43	5.61	5.04	4.60
	5	2.62	5.51	4.46	4.30	3.16
	6	3.30	2.52	2.81	5.46	6.54
	7	5.05	6.52	5.39	4.05	2.32
	8	3.71	2.18	6.81	2.82	6.89
	9	6.17	6.46	6.02	6.86	2.65
10Pin	1	6.71	6.11	6.22	2.84	6.73
	2	4.52	6.64	3.34	5.69	4.47
	3	6.10	5.49	4.65	6.38	4.13
	4	3.22	4.16	3.50	6.34	6.57
	5	5.70	2.43	2.69	4.54	6.80
	6	3.35	3.30	6.59	5.16	5.48
	7	5.07	3.78	3.23	3.31	3.30
	8	2.89	5.40	3.77	3.59	6.94
	9	3.80	3.58	4.74	2.20	4.23
	10	5.17	2.15	5.53	5.13	4.47
Shell		2.39	3.29	2.24	3.97	3.36
Result		Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

9.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No.1	No.2	No.3	No.4	No.5
9Pin	1	1.23	2.19	0.04	2.24	0.27
	2	1.23	0.81	3.13	0.30	0.68
	3	0.16	1.32	3.32	3.42	0.77
	4	0.33	2.68	0.76	2.58	1.71
	5	0.29	2.02	1.13	1.99	1.93
	6	0.29	2.65	0.01	3.26	0.20
	7	0.47	0.64	2.48	2.01	2.02
	8	0.34	1.52	4.68	3.76	4.83
	9	0.63	1.07	3.94	0.76	0.42
10Pin	1	0.02	2.33	1.48	1.84	1.25
	2	1.54	0.56	1.21	2.73	1.30
	3	2.86	1.97	1.87	3.31	2.41
	4	3.74	0.04	0.23	3.50	1.66
	5	0.44	3.76	3.90	0.97	4.52
	6	0.15	1.35	4.04	1.60	0.23
	7	1.63	2.45	0.11	3.39	0.95
	8	1.17	0.62	0.47	0.40	3.76
	9	2.05	2.53	0.32	0.19	2.34
	10	0.88	3.44	2.17	2.66	2.13
Shell		1.26	0.39	0.91	0.38	0.09
Result		Pass	Pass	Pass	Pass	Pass

10.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-H
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group H	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Salt Spray test	Salt Spray Tester	GX-Y-60	2025/5/5

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Salt Spray test	Testing chamber temperature 35℃, Saturation chamber temperature 47 ℃, Salt concentration 5%, pH=6.68, time 24 hours. (Reference:EIA-364-26B)	1.Appearance::No Corrosion (Terminal solder tail unrequested); 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Contact Resistance(Unit:mΩ):

Sample / Pin.		No.1	No.2	No.3	No.4	No.5
9Pin	1	5.33	6.62	5.32	6.42	2.72
	2	2.68	6.87	5.97	3.82	2.91
	3	2.03	2.93	4.42	6.80	6.94
	4	2.77	4.04	5.05	3.01	5.60
	5	4.74	3.65	4.67	3.59	2.71
	6	6.01	4.35	3.91	4.48	2.81

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	7	4.43	3.65	5.82	4.45	3.68
	8	4.32	6.90	6.97	4.40	3.51
	9	2.05	6.99	5.55	3.13	3.78
10Pin	1	2.93	5.04	4.90	4.78	6.52
	2	2.17	6.05	3.25	4.15	3.03
	3	4.58	6.02	3.51	6.14	2.87
	4	2.06	6.02	4.50	2.60	4.93
	5	4.11	3.78	2.04	3.91	4.47
	6	6.02	5.07	6.91	6.23	4.82
	7	3.15	2.67	3.29	3.73	4.64
	8	4.60	3.54	4.83	5.27	6.30
	9	5.33	5.31	5.87	4.53	2.89
	10	4.92	3.49	5.65	5.41	4.30
Shell		2.00	3.31	3.45	2.78	2.53
Result		Pass	Pass	Pass	Pass	Pass

3.After Salt Spray test:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Shell	OK	OK	OK	OK	OK
Contact	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	6.41	2.71	3.04	6.23	3.72
	2	4.31	6.73	6.01	6.90	5.96
	3	6.13	4.34	5.76	3.04	5.92
	4	2.58	6.56	6.62	2.67	2.67
	5	2.26	3.87	6.52	2.63	3.63
	6	3.82	2.33	2.96	4.11	3.91
	7	2.45	4.99	2.51	5.36	6.84
	8	5.96	3.05	2.83	4.34	5.52
	9	6.97	6.27	4.38	2.55	6.22
10Pin	1	5.44	2.43	2.24	2.29	5.05
	2	6.17	2.18	4.29	2.26	5.67
	3	3.87	5.89	2.86	5.63	2.40

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	4	3.36	3.48	2.40	2.67	2.41
	5	3.08	5.14	2.25	5.19	2.02
	6	6.76	3.06	2.11	4.45	5.94
	7	3.84	5.01	5.84	6.78	5.55
	8	6.52	4.78	4.45	4.39	6.98
	9	3.69	3.76	5.71	3.28	2.98
	10	3.68	4.83	5.55	5.77	4.56
Shell		3.23	2.60	2.04	3.64	3.69
Result		Pass	Pass	Pass	Pass	Pass

5. Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	1.08	3.91	2.28	0.19	1.00
	2	1.63	0.14	0.04	3.08	3.05
	3	4.10	1.41	1.34	3.76	1.02
	4	0.19	2.52	1.57	0.34	2.93
	5	2.48	0.22	1.85	0.96	0.92
	6	2.19	2.02	0.95	0.37	1.10
	7	1.98	1.34	3.31	0.91	3.16
	8	1.64	3.85	4.14	0.06	2.01
	9	4.92	0.72	1.17	0.58	2.44
10Pin	1	2.51	2.61	2.66	2.49	1.47
	2	4.00	3.87	1.04	1.89	2.64
	3	0.71	0.13	0.65	0.51	0.47
	4	1.30	2.54	2.10	0.07	2.52
	5	1.03	1.36	0.21	1.28	2.45
	6	0.74	2.01	4.80	1.78	1.12
	7	0.69	2.34	2.55	3.05	0.91
	8	1.92	1.24	0.38	0.88	0.68
	9	1.64	1.55	0.16	1.25	0.09
	10	1.24	1.34	0.10	0.36	0.26
Shell		1.23	0.71	1.41	0.86	1.16
Result		Pass	Pass	Pass	Pass	Pass

6. Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-I
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group I	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继伦

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Cold Resistance	Programmble constant Temperature and Humidity machine	GTTH-408-60-1P	2025/7/18

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Cold Resistance	Subject Unmated connectors should be tested according to the condition listed below ; Temperature:-40℃, Duration:250 hours, (Reference:EIA-364-59)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Contact Resistance(Unit:mΩ):

Sample / Pin.		No.1	No.2	No.3	No.4	No.5
9Pin	1	4.61	5.72	2.56	3.13	3.57
	2	2.78	6.70	4.36	4.59	6.77
	3	3.32	2.36	3.67	5.60	3.84
	4	5.20	4.01	3.98	2.03	3.33
	5	5.79	5.98	3.82	3.93	3.55
	6	6.81	6.56	3.02	2.43	4.75

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	7	3.27	2.75	2.46	4.77	2.05
	8	3.05	3.64	6.01	6.13	6.46
	9	3.98	6.90	5.28	5.37	5.00
10Pin	1	6.09	4.86	2.29	4.41	6.80
	2	3.18	3.06	5.43	4.85	3.11
	3	4.14	5.88	7.00	4.67	4.03
	4	2.49	2.07	6.20	5.79	4.90
	5	5.87	4.55	6.86	2.93	2.58
	6	4.46	5.18	4.47	3.21	3.63
	7	2.51	2.42	5.28	5.76	2.06
	8	4.23	3.95	3.99	6.38	3.27
	9	2.61	4.65	3.30	2.18	2.00
	10	2.76	3.37	5.90	5.12	5.09
Shell		3.22	2.50	2.95	3.27	3.36
Result		Pass	Pass	Pass	Pass	Pass

3.After Cold Resistance test:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	3.51	2.17	3.86	2.73	5.70
	2	6.61	3.06	3.52	3.12	6.16
	3	3.59	3.89	6.73	4.70	5.89
	4	2.49	2.48	4.59	2.89	5.54
	5	2.83	2.58	2.31	2.17	3.57
	6	5.51	6.87	2.55	4.84	2.24
	7	3.00	4.91	4.12	6.35	2.23
	8	3.95	3.84	2.27	4.77	5.19
	9	4.46	6.27	4.54	5.53	4.47
10Pin	1	2.25	2.33	2.44	3.37	5.16
	2	6.20	2.27	3.16	5.18	2.87
	3	6.70	4.22	5.52	3.50	3.87
	4	5.46	4.69	5.00	4.97	6.11

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	5	4.75	3.70	3.18	3.70	4.23
	6	3.21	3.20	6.33	5.78	2.32
	7	3.19	6.66	3.91	6.18	3.47
	8	3.22	4.83	3.40	4.41	4.78
	9	2.83	6.31	2.43	4.96	4.99
	10	4.80	2.08	3.31	5.61	6.84
Shell		2.28	2.33	3.62	2.96	3.12
Result		Pass	Pass	Pass	Pass	Pass

5.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	1.10	3.55	1.30	0.40	2.13
	2	3.83	3.64	0.84	1.47	0.61
	3	0.27	1.53	3.06	0.90	2.05
	4	2.71	1.53	0.61	0.86	2.21
	5	2.96	3.40	1.51	1.76	0.02
	6	1.30	0.31	0.47	2.41	2.51
	7	0.27	2.16	1.66	1.58	0.18
	8	0.90	0.20	3.74	1.36	1.27
	9	0.48	0.63	0.74	0.16	0.53
10Pin	1	3.84	2.53	0.15	1.04	1.64
	2	3.02	0.79	2.27	0.33	0.24
	3	2.56	1.66	1.48	1.17	0.16
	4	2.97	2.62	1.20	0.82	1.21
	5	1.12	0.85	3.68	0.77	1.65
	6	1.25	1.98	1.86	2.57	1.31
	7	0.68	4.24	1.37	0.42	1.41
	8	1.01	0.88	0.59	1.97	1.51
	9	0.22	1.66	0.87	2.78	2.99
	10	2.04	1.29	2.59	0.49	1.75
Shell		0.94	0.17	0.67	0.31	0.24
Result		Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-J
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group J	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Heat resistance test	High Temperature Oven	RHDM-453	2025/5/5

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Heat resistance test	Subject Unmated connectors should be tested according to the condition listed below ; Temperature:85℃, Duration:250 hours, (Reference:EIA-364-17B)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Contact Resistance(Unit:mΩ):

Sample / Pin.		No.1	No.2	No.3	No.4	No.5
9Pin	1	2.34	2.73	3.56	3.22	2.77
	2	5.21	5.71	3.21	3.50	5.25
	3	4.17	4.58	5.99	6.93	6.66
	4	4.57	4.23	2.05	4.18	3.91
	5	2.45	5.72	5.06	5.83	5.67
	6	4.84	2.79	3.16	6.81	3.70

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	7	5.07	4.44	5.45	5.97	5.72
	8	6.44	4.84	6.29	4.72	5.43
	9	6.93	4.50	5.82	4.03	3.36
10Pin	1	5.45	4.19	2.92	3.72	3.84
	2	5.13	5.02	5.26	4.94	6.08
	3	5.91	6.25	5.28	3.67	5.70
	4	3.20	5.82	2.04	3.92	4.66
	5	4.63	5.73	5.00	2.24	3.66
	6	4.55	5.49	3.59	5.84	2.56
	7	5.39	6.25	4.21	3.81	6.37
	8	2.55	3.60	3.55	3.04	5.56
	9	2.19	3.90	3.38	6.50	2.46
	10	4.37	4.44	3.73	6.34	5.08
Shell		3.98	2.37	2.96	2.85	2.24
Result		Pass	Pass	Pass	Pass	Pass

3.After Heat resistance:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	3.72	2.60	5.53	2.82	5.20
	2	3.21	4.07	6.93	2.41	5.30
	3	4.01	2.77	2.91	6.58	2.53
	4	2.33	3.17	5.57	4.15	2.19
	5	3.57	2.43	5.42	4.64	2.98
	6	2.46	3.95	3.33	2.22	4.94
	7	2.38	5.38	4.14	2.16	5.38
	8	6.03	3.67	4.48	3.22	4.03
	9	4.03	4.85	4.17	3.90	2.00
10Pin	1	4.12	3.67	6.34	6.21	4.69
	2	4.23	4.25	3.22	2.41	5.10
	3	4.62	2.56	4.21	4.47	4.43
	4	4.48	2.23	2.02	4.66	5.11

廣業電子 VAST ELECTRONICS

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	5	5.92	5.28	4.02	2.47	6.07
	6	5.31	4.75	5.60	6.41	4.10
	7	4.03	6.09	3.05	6.96	4.09
	8	3.90	4.07	3.68	2.68	6.30
	9	3.73	3.89	2.44	6.66	6.64
	10	5.43	2.19	4.54	5.96	2.85
Shell		3.94	3.84	3.04	3.82	3.52
Result		Pass	Pass	Pass	Pass	Pass

5.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	1.38	0.13	1.97	0.40	2.43
	2	2.00	1.64	3.72	1.09	0.05
	3	0.16	1.81	3.08	0.35	4.13
	4	2.24	1.06	3.52	0.03	1.72
	5	1.12	3.29	0.36	1.19	2.69
	6	2.38	1.16	0.17	4.59	1.24
	7	2.69	0.94	1.31	3.81	0.34
	8	0.41	1.17	1.81	1.50	1.40
	9	2.90	0.35	1.65	0.13	1.36
10Pin	1	1.33	0.52	3.42	2.49	0.85
	2	0.90	0.77	2.04	2.53	0.98
	3	1.29	3.69	1.07	0.80	1.27
	4	1.28	3.59	0.02	0.74	0.45
	5	1.29	0.45	0.98	0.23	2.41
	6	0.76	0.74	2.01	0.57	1.54
	7	1.36	0.16	1.16	3.15	2.28
	8	1.35	0.47	0.13	0.36	0.74
	9	1.54	0.01	0.94	0.16	4.18
	10	1.06	2.25	0.81	0.38	2.23
Shell		0.04	1.47	0.08	0.97	1.28
Result		Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-K
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group K	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
Contact resistance	Micro-Ohmmeter	TH2512B	2025/5/5
Thermal Aging test	High Temperature Oven	RHDM-453	2025/5/5

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Contact resistance	Subject mated connectors in conduction of open circuit voltage 20mV DC max.,100mA max. Except wire conductor resistance (Reference:EIA-364-23A) ;	Initial Contact resistance Excluding conductor Resistance:10 mΩ Max.
Thermal Aging test	Subject mated connectors should be tested according to the condition listed below ; Temperature:105℃, Duration:250 hours, (Reference:EIA-364-17B)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Contact Resistance(Unit:mΩ):

Sample / Pin.		No.1	No.2	No.3	No.4	No.5
9Pin	1	2.50	6.93	2.32	6.02	2.64
	2	2.25	4.56	3.21	4.97	3.31
	3	5.84	5.04	3.03	6.85	6.93
	4	3.68	4.59	2.97	6.29	6.88
	5	4.30	5.83	4.17	4.14	3.41
	6	4.17	3.26	5.35	4.81	4.74
	7	2.09	2.19	6.76	4.48	4.06

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	8	3.70	6.36	6.67	2.66	3.65
	9	2.42	2.29	5.01	2.32	4.55
10Pin	1	6.38	5.32	3.00	6.80	4.72
	2	2.63	3.03	3.22	6.48	4.70
	3	5.02	3.68	2.14	5.59	5.99
	4	4.44	4.22	5.40	4.78	5.07
	5	4.28	4.84	5.06	5.64	5.17
	6	6.57	5.74	5.17	3.42	4.32
	7	5.81	6.68	5.80	3.46	6.06
	8	6.17	3.10	6.36	5.40	4.99
	9	2.66	3.02	6.22	4.08	4.18
	10	3.56	2.86	6.51	6.25	6.80
Shell		1.84	2.67	1.95	1.01	1.16
Result		Pass	Pass	Pass	Pass	Pass

3.After Thermal Aging test:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.Contact Resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	4.60	5.46	2.38	6.00	2.81
	2	4.57	6.12	5.67	2.72	6.26
	3	5.77	4.13	2.92	5.90	6.72
	4	3.71	3.62	2.08	6.41	2.15
	5	4.53	6.98	3.45	6.62	4.14
	6	6.91	5.73	2.21	3.46	2.02
	7	5.44	3.22	6.90	6.15	2.90
	8	4.28	4.73	2.54	4.44	5.21
	9	5.31	4.80	2.23	2.85	3.50
10Pin	1	5.86	6.66	3.81	6.85	6.24
	2	6.62	3.82	4.79	2.42	5.05
	3	2.14	2.76	2.01	2.10	5.85
	4	3.22	2.28	6.87	6.25	2.20
	5	4.84	5.49	5.33	4.36	6.79

检 测 报 告
Test Report

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
10Pin	6	4.34	3.28	2.73	4.22	4.73
	7	4.74	2.91	5.84	4.69	2.23
	8	6.38	5.25	6.75	3.93	3.20
	9	2.77	5.02	4.39	5.52	2.05
	10	4.94	3.54	3.35	6.10	6.65
Shell		1.98	1.62	1.43	1.08	1.26
Result		Pass	Pass	Pass	Pass	Pass

5.Change before and after contact resistance(Unit:mΩ):

Pin. \ Sample		No. 1	No. 2	No. 3	No. 4	No. 5
9Pin	1	2.10	1.47	0.06	0.02	0.17
	2	2.32	1.56	2.46	2.25	2.95
	3	0.07	0.91	0.11	0.95	0.21
	4	0.03	0.97	0.89	0.12	4.73
	5	0.23	1.15	0.72	2.48	0.73
	6	2.74	2.47	3.14	1.35	2.72
	7	3.35	1.03	0.14	1.67	1.16
	8	0.58	1.63	4.13	1.78	1.56
	9	2.89	2.51	2.78	0.53	1.05
10Pin	1	0.52	1.34	0.81	0.05	1.52
	2	3.99	0.79	1.57	4.06	0.35
	3	2.88	0.92	0.13	3.49	0.14
	4	1.22	1.94	1.47	1.47	2.87
	5	0.56	0.65	0.27	1.28	1.62
	6	2.23	2.46	2.44	0.80	0.41
	7	1.07	3.77	0.04	1.23	3.83
	8	0.21	2.15	0.39	1.47	1.79
	9	0.11	2.00	1.83	1.44	2.13
	10	1.38	0.68	3.16	0.15	0.15
Shell		0.14	1.05	0.52	0.07	0.10
Result		Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR24070008-L
产品名称 Product Name:	HDMI Connector
产品料号 Part No.:	161012182
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2024 年 07 月 05 日 - 2024 年 07 月 21 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group L	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有校日期 Last Calibrated
Examination Of Product	Visual	/	/
IR-reflow	Reflow oven	IPC-710A	2025/10/21

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
IR-reflow test	Temp. 217℃.Max time for 60± 0.5 sec. Temp. 230℃.Max time for 50± 0.5 sec.Peak temp.260℃.Max time for 10 sec (Reference:EIA-364-56).	Appearance:No damage

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.IR-reflow test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

Test Report

Company Name shown on Report	GUANG DONG POLYGRUIMER NEW MATERIAL CO.,LTD
Address	NO.46,LIAOBU JINFU SECOND ROAD,LIAOBU TOWN,DONGGUAN CITY,GUANGDONG PROVINCE

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

Sample Name	LCP BK
Model No.	S475、S471、E4008
Sample Received Date	Mar. 4, 2024
Testing Period	Mar. 4, 2024 to Mar. 8, 2024

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), Chlorine (Cl), Bromine (Br) in the submitted sample(s).
Test Method/Test Result(s)	Please refer to the following page(s).

Approved by: Hill Zheng Date: Mar. 8, 2024

Hill Zheng
Technical Manager

No. R228412064

Test Report

Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC

Test Report

Test Result(s)

Tested Item(s)	Result	MDL
	001	
Lead (Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

Tested Item(s)	Result	MDL
	001	
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	001	
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

Test Report

Tested Item(s)	Result	MDL
	001	
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

Tested Item(s)	Result	MDL
	001	
Chlorine (Cl)	N.D.	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg

Sample/Part Description

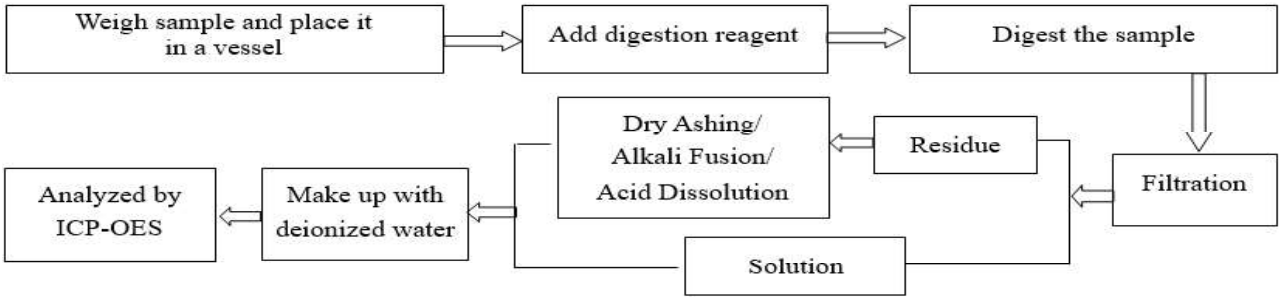
No.	CTI Sample ID	Description
1	001	Black plastic grains

Remark: **-The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-Information Statement:Different Part No. with different buyer.
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-The test result(s) is(are) presented in reference to the result(s) that reported in A2240104341101001.

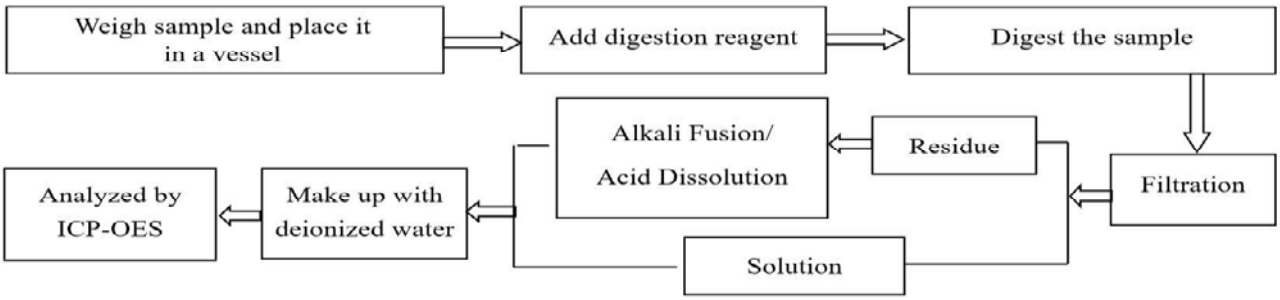
Test Report

Test Process

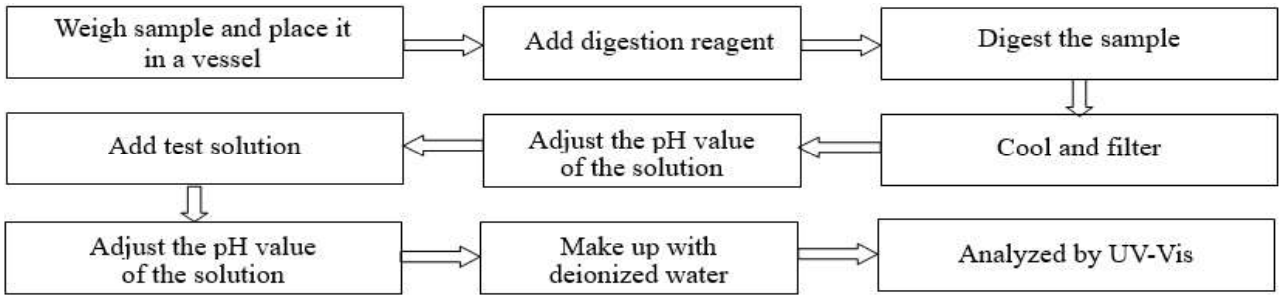
1. Lead (Pb), Cadmium (Cd), Chromium(Cr)



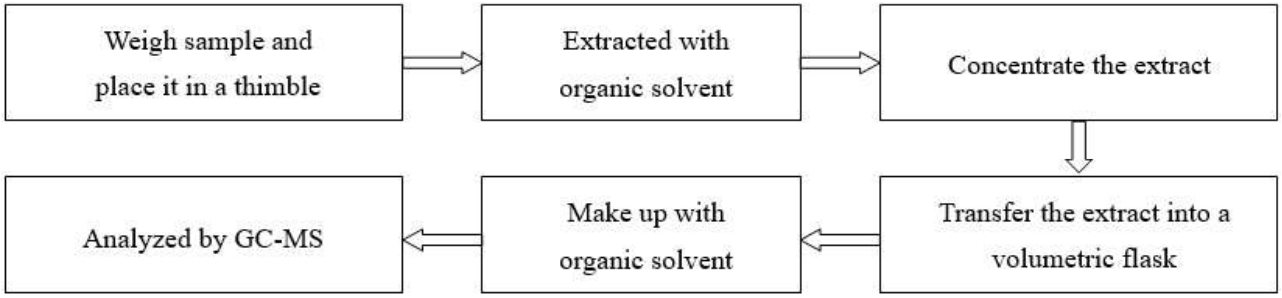
2. Mercury (Hg)



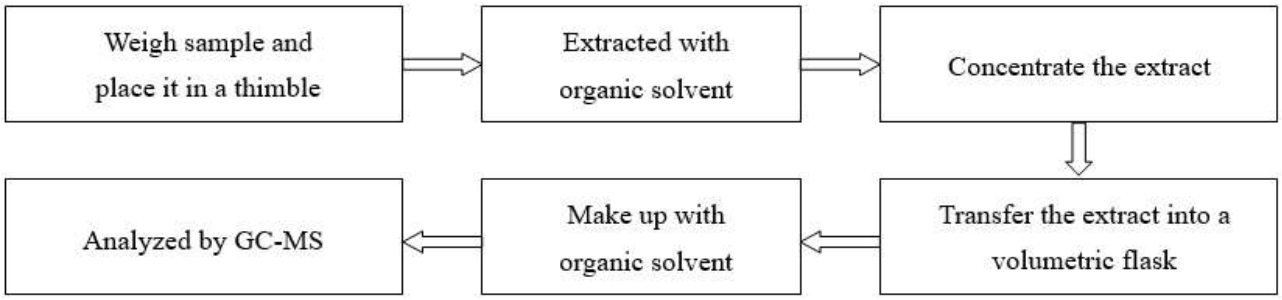
3. Hexavalent Chromium (Cr(VI))



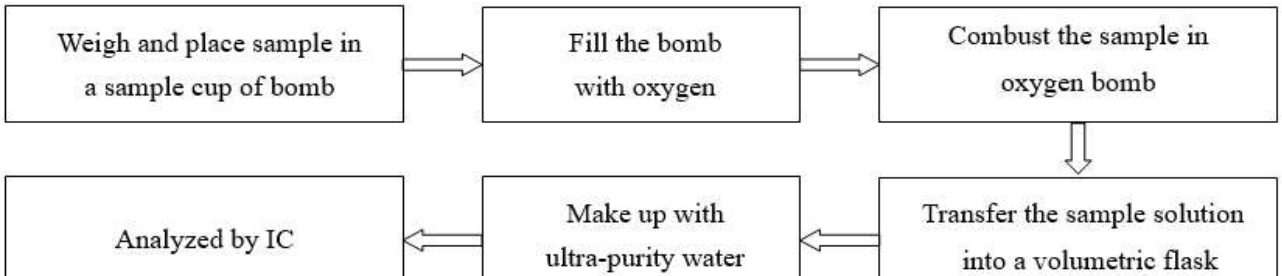
4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Chlorine (Cl), Bromine (Br)



Test Report

Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 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. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 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. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

*** End of Report ***

Test Report

No.: CANEC23016577105 **Date:** Dec 20, 2023

Client Name: SHANGHAI WU XING COPPER CO.,LTD

Client Address: NO.219,WENGONG ROAD,XINBANG INDUSTRY AREA,SONGJIANGDISTRICT,SHANGHAI

Sample Name: A brass band

Model No.: H65(C2680)

The above sample(s) and information were provided by the client.

SGS Job No.: GZP23-022360

Sample Receiving Date: Dec 14, 2023

Testing Period: Dec 14, 2023 ~ Dec 20, 2023

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Zm Guan
Approved Signatory

scan to see the report
7CA2175E

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	CAN23-0165771-0001.C003	Brassy metal

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A3
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	14
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI)) ▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

Test Item(s)	Limit	Unit(s)	MDL	A3
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(DIBP)	1000	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm². The sample coating is considered to contain Cr(VI)

b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm²). The coating is considered a non-Cr(VI) based coating

c. The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive-unavoidable coating variations may influence the determination.

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.

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.

检验检测专用章 Inspection & Testing Services

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

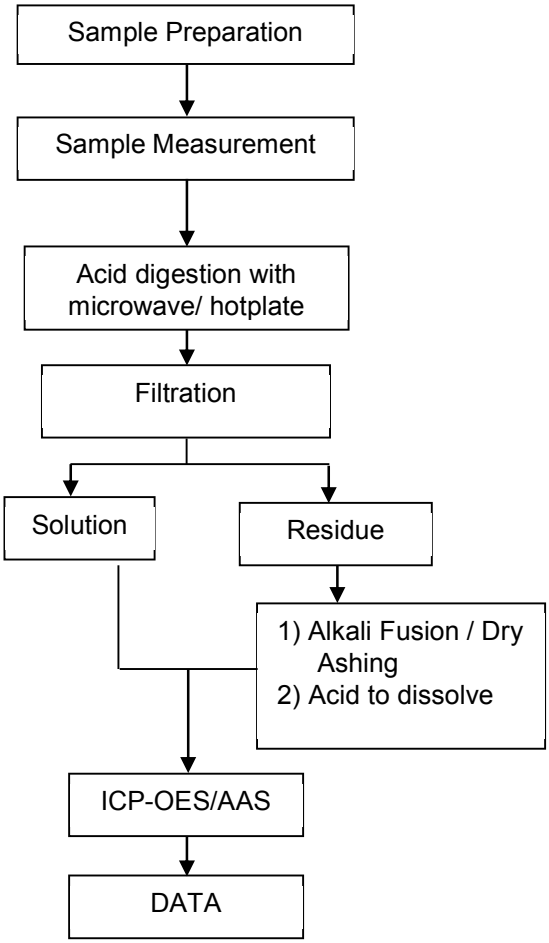
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

ATTACHMENTS

Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.

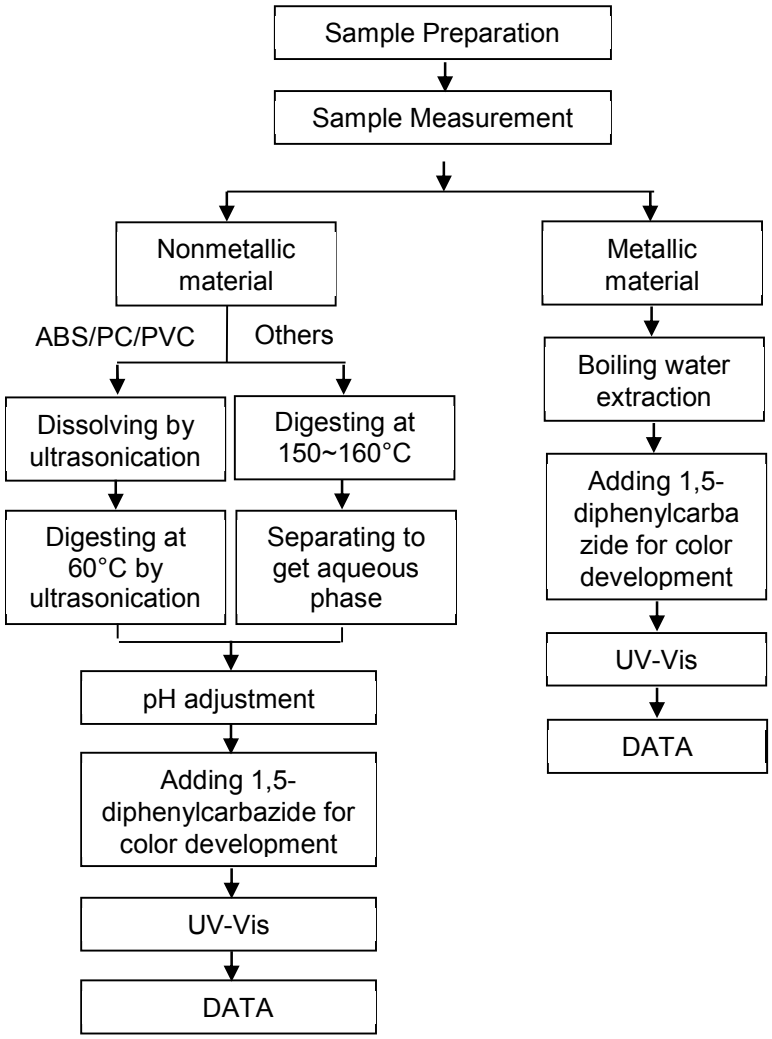


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Technical Laboratory
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart

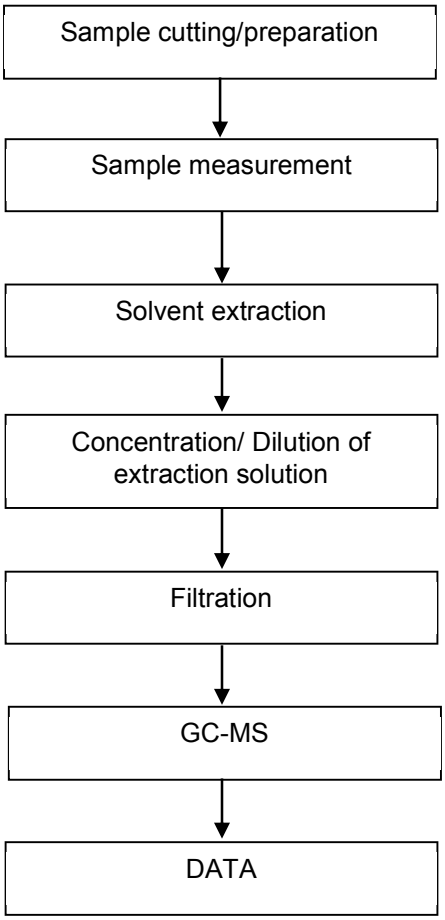


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

ATTACHMENTS

PBBs/PBDEs Testing Flow Chart

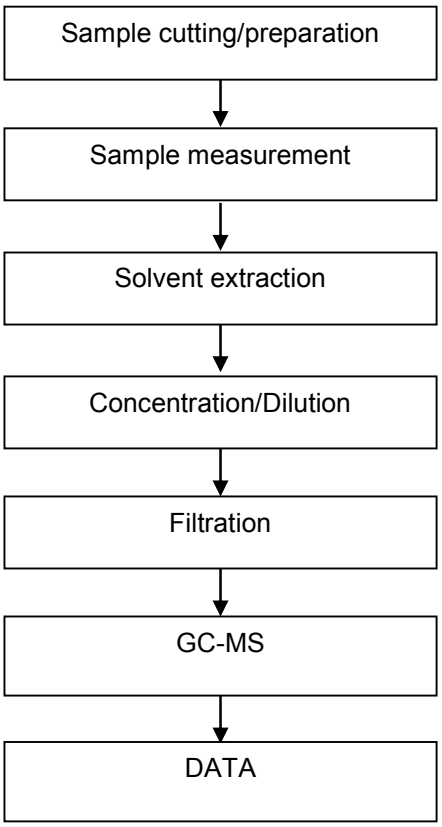


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Technical Laboratory
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

ATTACHMENTS

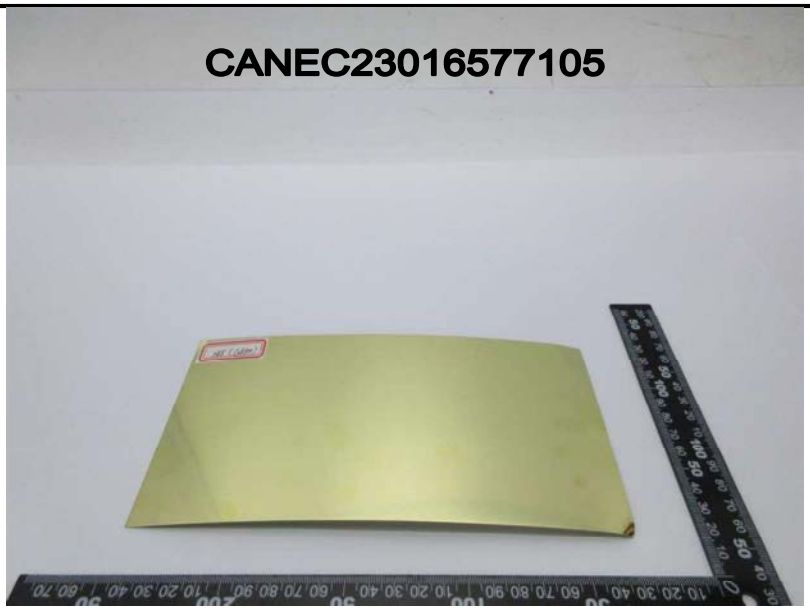
Phthalates Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Technical Laboratory
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

Sample Photo:



CAN23-0165771-0001.C003

SGS authenticate the photo on original report only

*** End of Report ***

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Co., Ltd. Chemical Laboratory
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

检测报告
Test Report

报告编号 A2240076240101002E
Report No. A2240076240101002E

报告抬头公司名称 Company Name shown on Report 东莞市建华金属材料有限公司 DONGGUAN JIANHUA METAL MATERIALS CO.,LTD

地 址 Address 东莞市长安镇涌头社区德政东路49号 NO.49,DEZHENG EAST ROAD,YONGTOU COMMUNITY,CHANG'AN TOWN,DONGGUAN CITY 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 applicant

样品名称	SUS304
Sample Name	SUS304
材料名称	SUS304
Material	SUS304
样品接收日期	2024.02.20
Sample Received Date	Feb. 20, 2024
样品检测日期	2024.02.20-2024.02.23
Testing Period	Feb. 20, 2024 to Feb. 23, 2024

检测要求 Test Requested 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。
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 Test Method/Test Result(s) 请参见下页。
Please refer to the following page(s).

批 准 Approved by 郑晴涛 技术经理 Technical Manager

日 期 Date 2024.02.23

No. R158921500

检测报告
Test Report

****

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.

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS

检测报告
Test Report

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
	002		
铅 Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴联苯 Polybrominated Biphenyls (PBBs)*			
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg	

检测报告
Test Report

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
	002		
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

检测报告
Test Report

样品/部位描述Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	002	银色金属 Silvery metal

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 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，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。

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 μg/cm²

-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 μg/cm². 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.

注释: **–“*”表示该项目/方法不在CNAS认可范围内。**

–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。

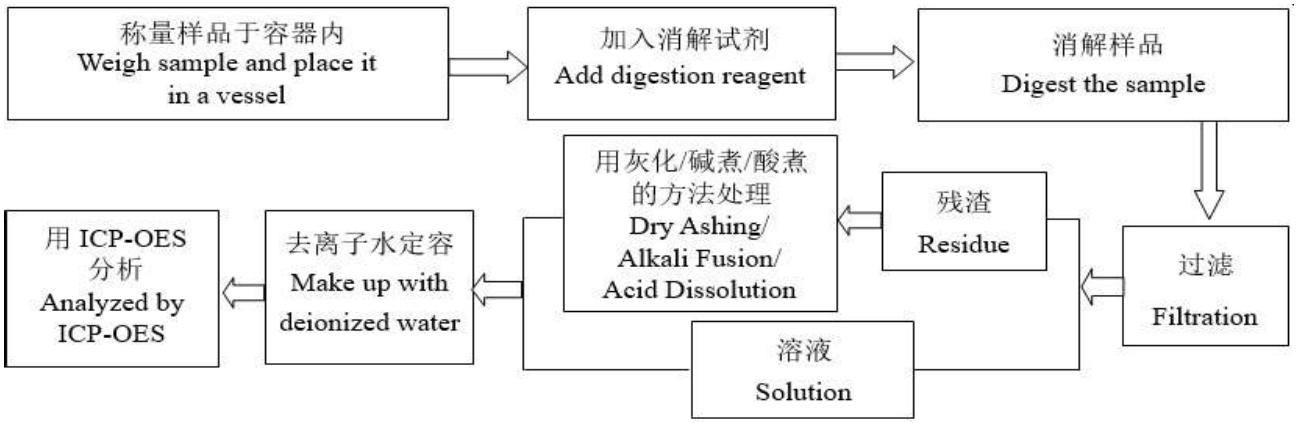
Note: **-“*” indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

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

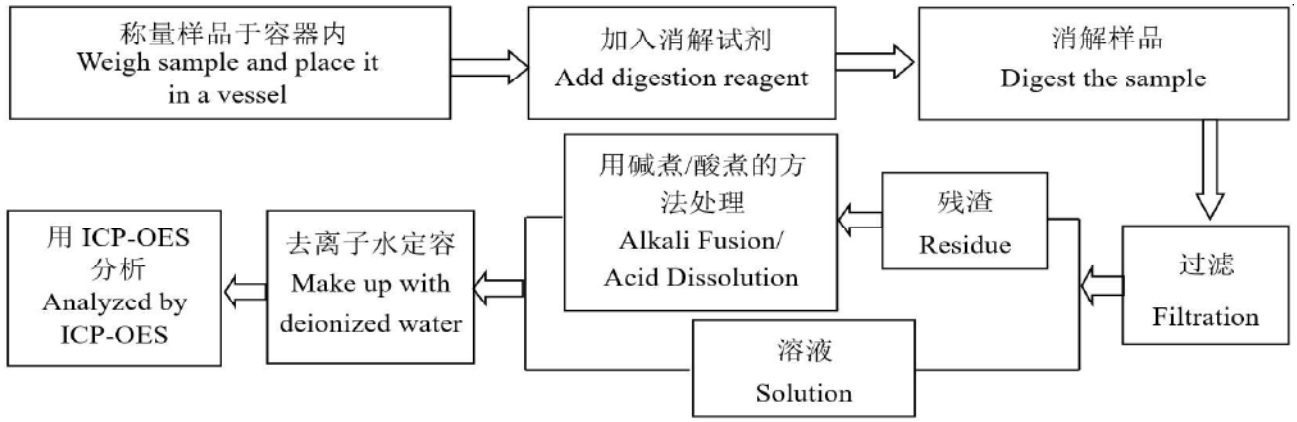
检测报告
Test Report

检测流程 Test Process

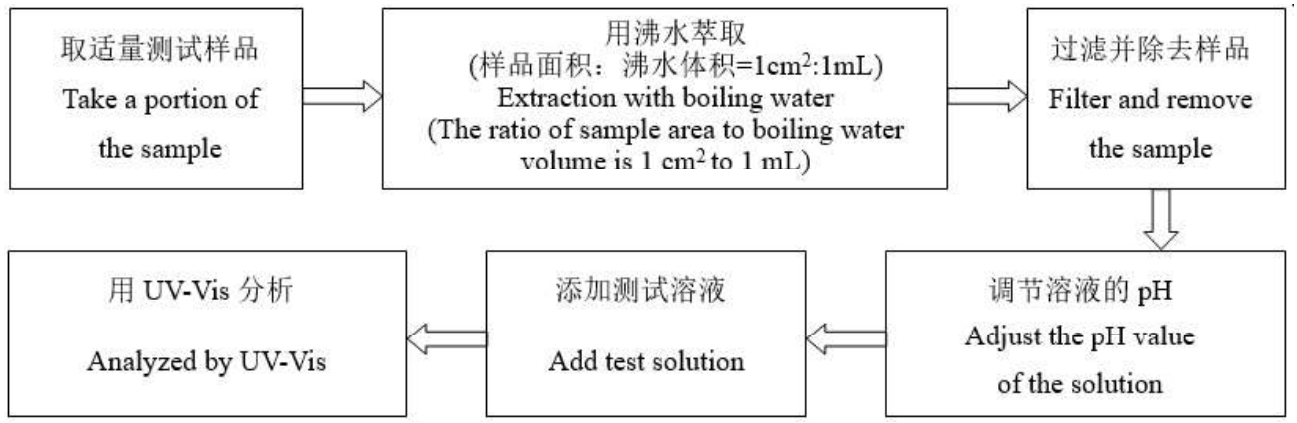
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



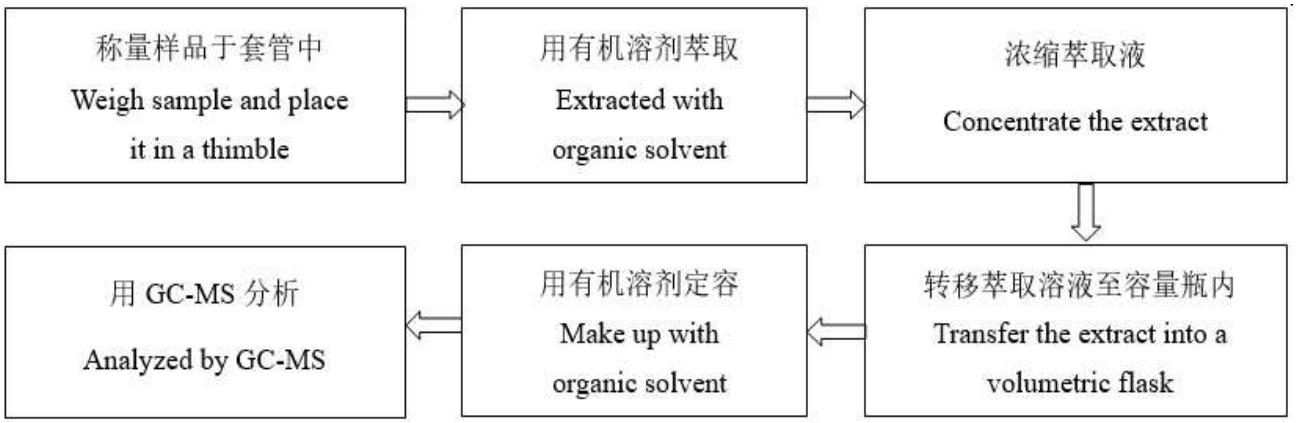
2. **汞(Hg)**
   Mercury (Hg)



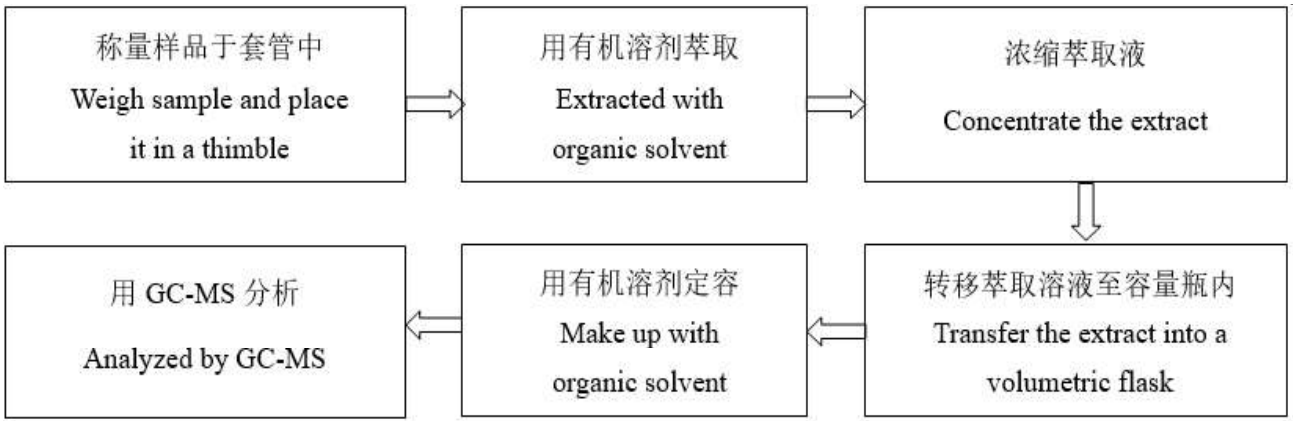
3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))



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

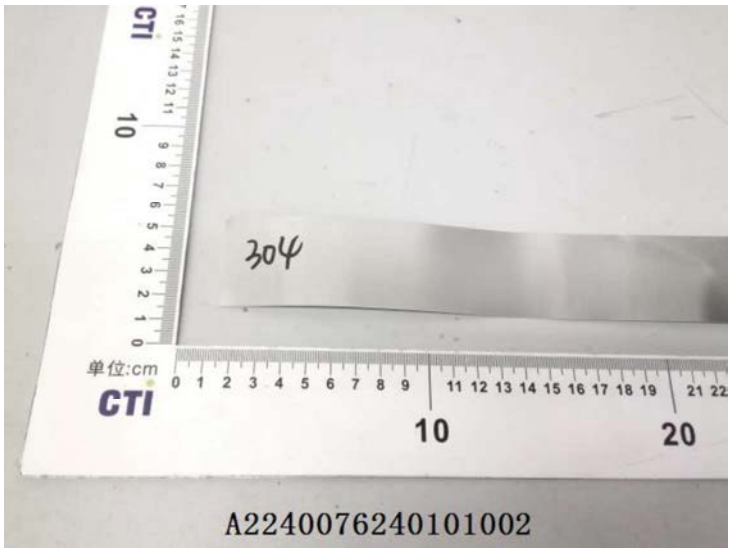


5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)
Phthalates (DBP, BBP, DEHP, DIBP)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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 ***

检测报告
Test Report

报告编号 A2240027156101001E
Report No. A2240027156101001E

报告抬头公司名称 Company Name shown on Report 东莞市全源金属表面处理有限公司
DONGGUAN QUANYUAN METAL SURFACE TREATMENT CO., LTD

地 址 Address 广东省东莞市麻涌镇广麻大道126号71号楼401室
ROOM 401, BUILDING 71, 126 GUANGMA AVENUE, MACHONG TOWN, DONGGUAN CITY, GUANGDONG 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	Au电镀层
Sample Name	Au电镀层
样品接收日期	2024.01.15
Sample Received Date	Jan. 15, 2024
样品检测日期	2024.01.15-2024.01.18
Testing Period	Jan. 15, 2024 to Jan. 18, 2024

检测要求 Test Requested

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)，铍(Be)，锑(Sb)，氟(F)，氯(Cl)，溴(Br)，碘(I)，全氟辛酸(PFOA)，全氟辛烷磺酸(PFOS)进行测试。

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), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS) in the submitted sample(s).

检测依据/检测结果 Test Method/Test Result(s) 请参见下页。
Please refer to the following page(s).

批 准
Approved by 郑晴涛
郑晴涛
技术经理 Technical Manager

日 期
Date 2024.01.18

No. R338859123

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
广东省深圳市宝安区新安街道兴东社区华测检测大楼
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
锑 Antimony(Sb)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
氟 Fluorine (F)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
铅 Lead (Pb)	N.D.	2 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
多溴联苯 Polybrominated Biphenyls (PBBs)*		
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
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
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 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
邻苯二甲酸二异丁酯 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
	001	
铍 Beryllium (Be)*	N.D.	2 mg/kg
锑 Antimony (Sb)*	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
氟 Fluorine (F)*	N.D.	1 μg/cm²
氯 Chlorine (Cl)*	N.D.	1 μg/cm²
溴 Bromine (Br)*	N.D.	1 μg/cm²
碘 Iodine (I)*	N.D.	1 μg/cm²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	001	金色镀层 Golden plating

备注: **对于检测铅，镉，汞，铍，锑之样品已消解完全。**

-N.D. = 未检出 (小于方法检出限或定量限)

-mg/kg = ppm = 百万分之一

-LOQ = 定量限, 六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，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。

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

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 μg/cm². 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.

注释: **-"*"表示该项目/方法不在CNAS认可范围内。**

-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。

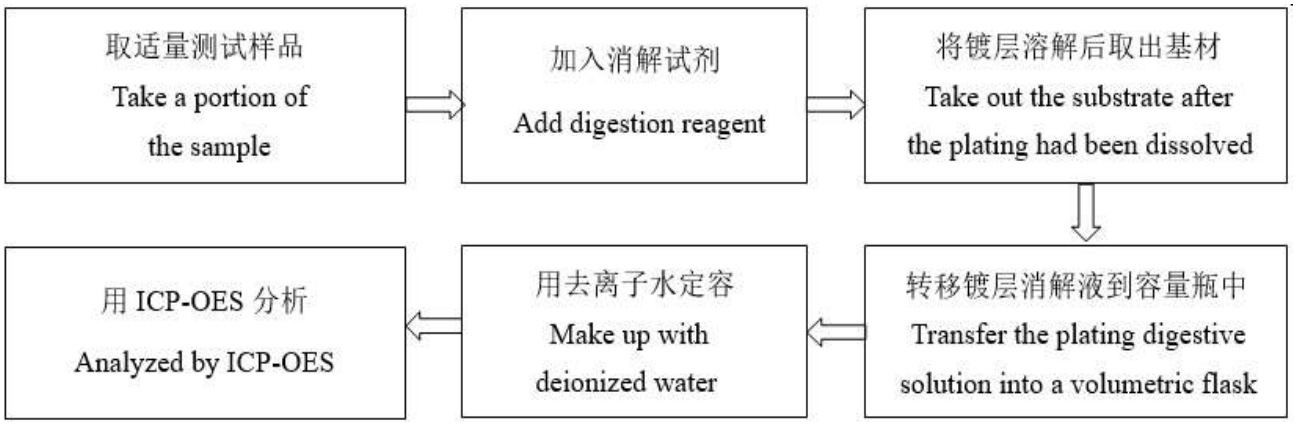
Note: **-"*" indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

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

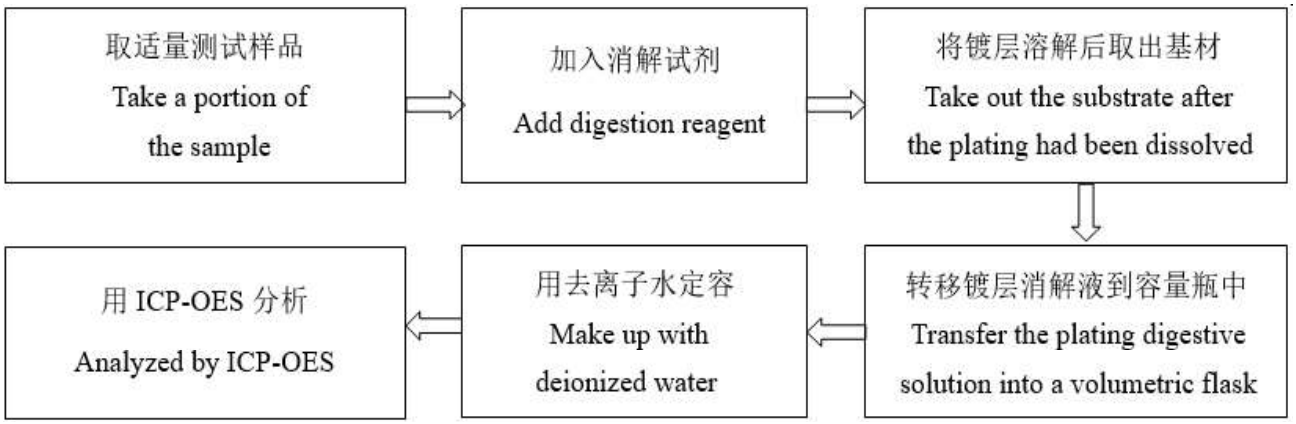
检测报告
Test Report

检测流程 Test Process

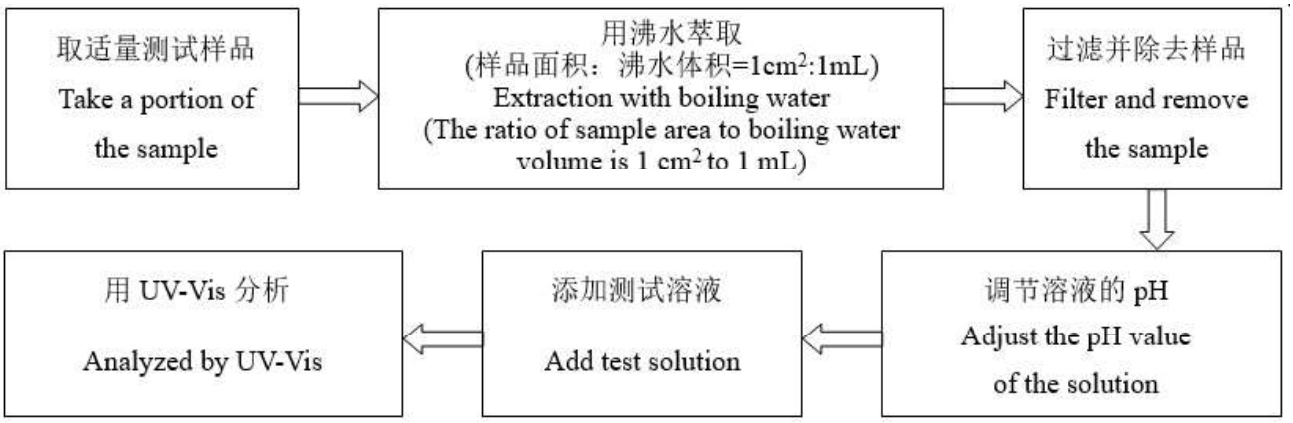
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



2. **汞(Hg)**
   Mercury (Hg)

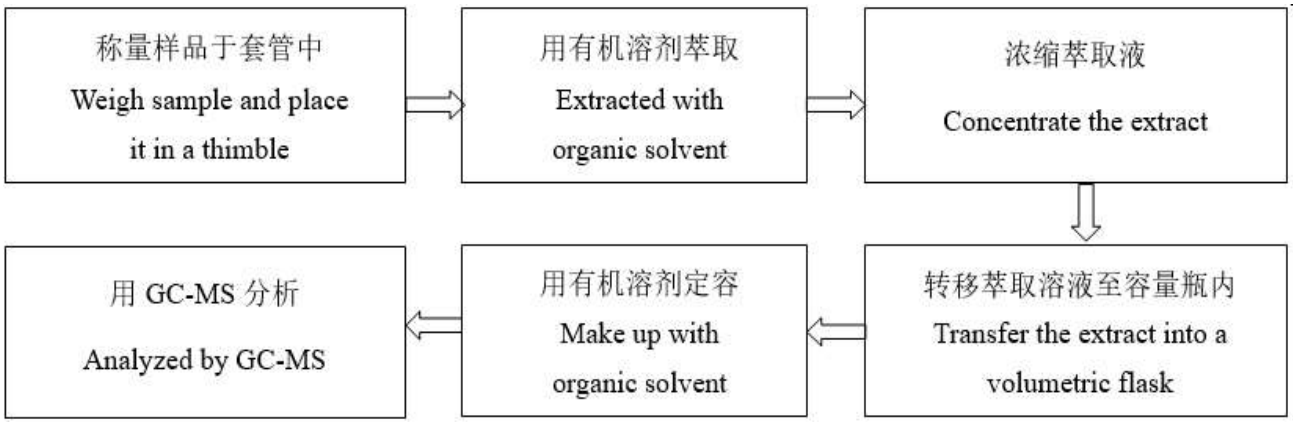


3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))

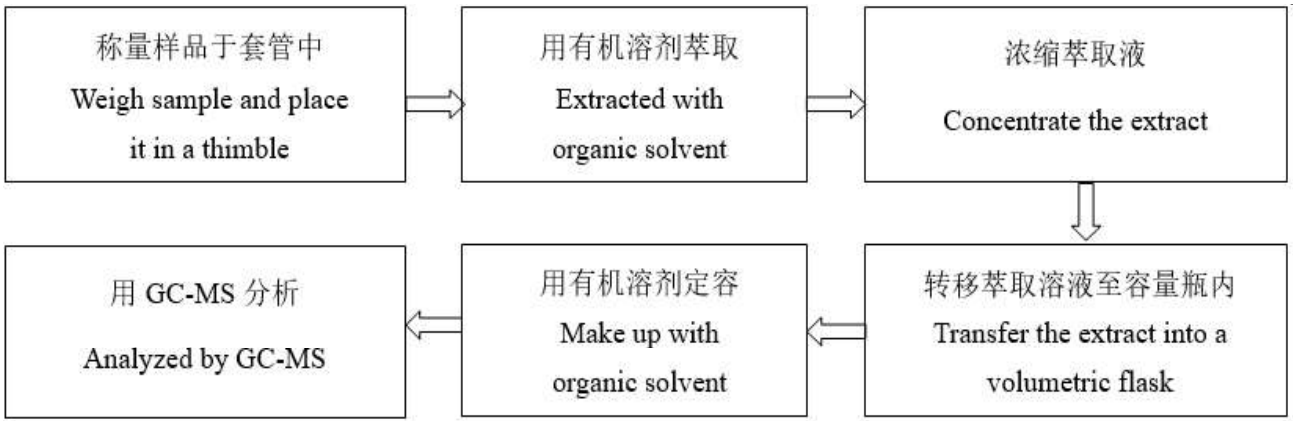


检测报告
Test Report

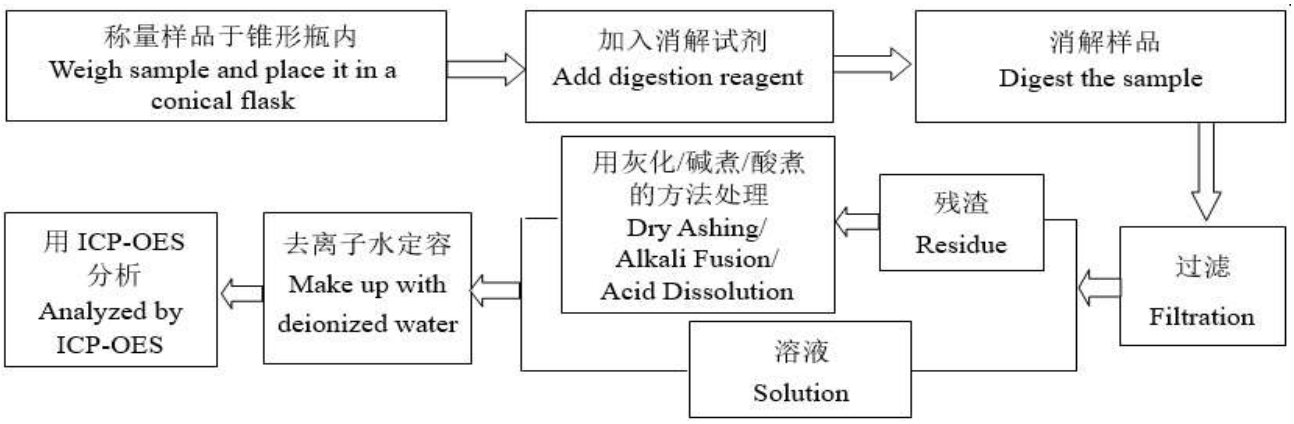
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)
Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



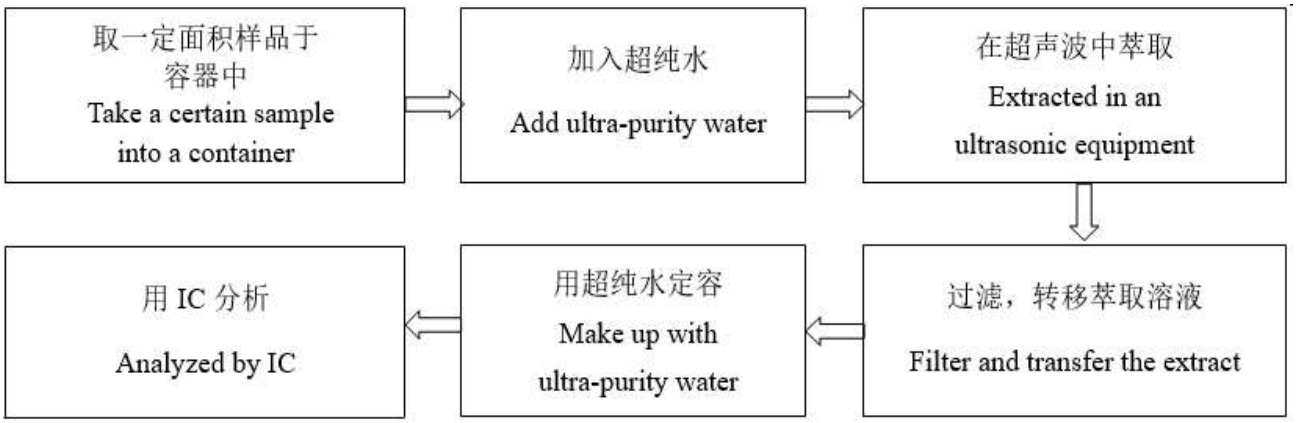
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)
Phthalates (DBP, BBP, DEHP, DIBP)



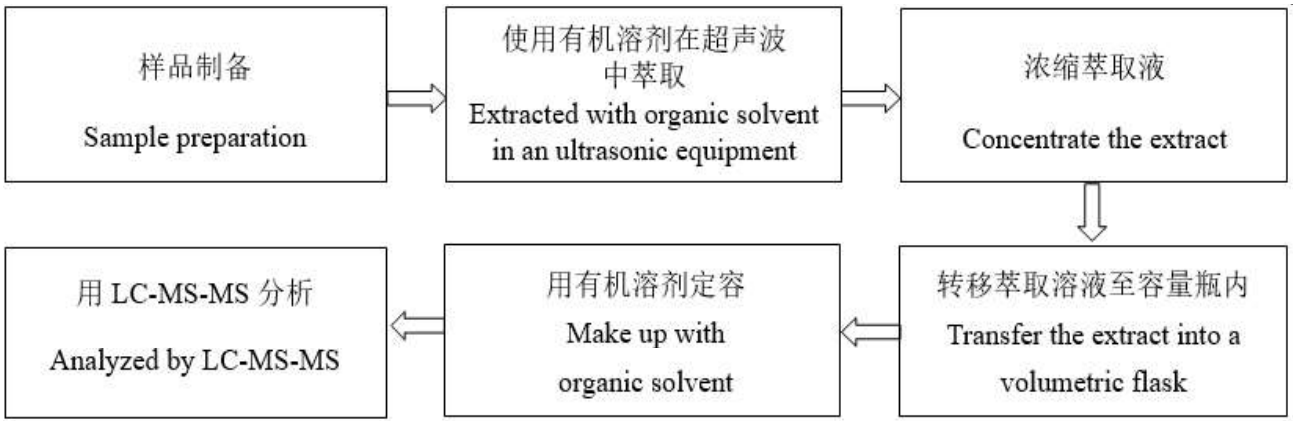
6. 铍(Be)， 锑(Sb)
Beryllium(Be), Antimony(Sb)



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



8. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)
Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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 ***

检测报告
Test Report

报告编号 A2240027156101002E
Report No. A2240027156101002E

报告抬头公司名称 Company Name shown on Report 东莞市全源金属表面处理有限公司 DONGGUAN QUANYUAN METAL SURFACE TREATMENT CO., LTD

地 址 Address 广东省东莞市麻涌镇广麻大道126号71号楼401室 ROOM 401, BUILDING 71, 126 GUANGMA AVENUE, MACHONG TOWN, DONGGUAN CITY, GUANGDONG 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	Ni电镀层
Sample Name	Ni电镀层
样品接收日期	2024.01.15
Sample Received Date	Jan. 15, 2024
样品检测日期	2024.01.15-2024.01.18
Testing Period	Jan. 15, 2024 to Jan. 18, 2024

检测要求 Test Requested

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)，铍(Be)，锑(Sb)，氟(F)，氯(Cl)，溴(Br)，碘(I)，全氟辛酸(PFOA)，全氟辛烷磺酸(PFOS)进行测试。

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), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS) in the submitted sample(s).

检测依据/检测结果 Test Method/Test Result(s) 请参见下页。 Please refer to the following page(s).

批 准
Approved by 郑晴涛

郑晴涛
技术经理 Technical Manager

日 期
Date 2024.01.18

No. R338859123

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
广东省深圳市宝安区新安街道兴东社区华测检测大楼

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
锑 Antimony(Sb)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
氟 Fluorine (F)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
铅 Lead (Pb)	N.D.	2 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
多溴联苯 Polybrominated Biphenyls (PBBs)*		
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
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
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 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
邻苯二甲酸二异丁酯 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
	002	
铍 Beryllium (Be)*	N.D.	2 mg/kg
锑 Antimony (Sb)*	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
氟 Fluorine (F)*	N.D.	1 μg/cm²
氯 Chlorine (Cl)*	N.D.	1 μg/cm²
溴 Bromine (Br)*	N.D.	1 μg/cm²
碘 Iodine (I)*	N.D.	1 μg/cm²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	002	银色镀层 Silvery plating

备注: **对于检测铅，镉，汞，铍，锑之样品已消解完全。**
-N.D. = 未检出 (小于方法检出限或定量限)
-mg/kg = ppm = 百万分之一
-LOQ = 定量限, 六价铬的定量限为0.10 μg/cm²
-▼六价铬浓度小于0.10 μg/cm²，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。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Beryllium, Antimony.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL or LOQ)
-mg/kg = ppm = parts per million
-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²
-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 μg/cm². 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.

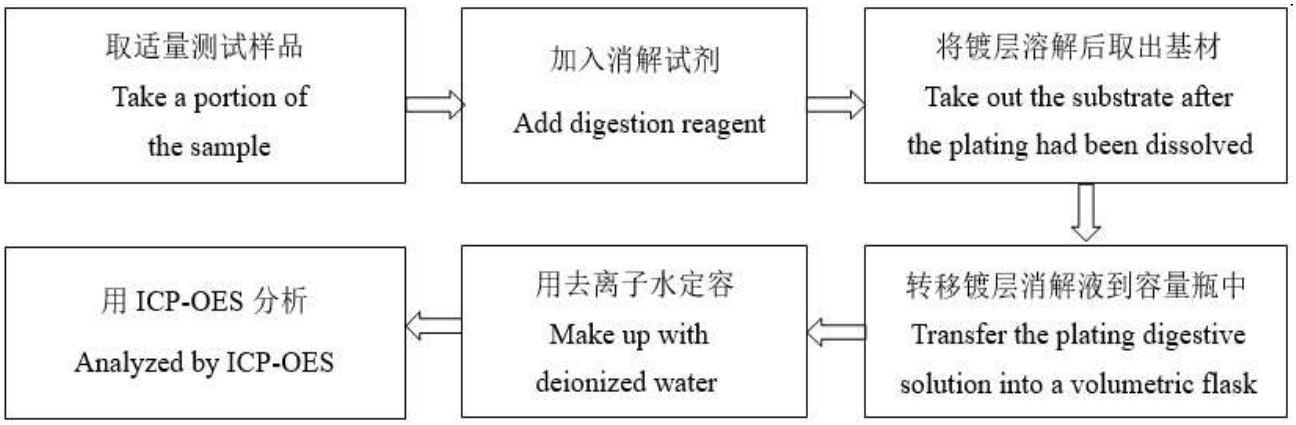
注释: **-"*"表示该项目/方法不在CNAS认可范围内。**
-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

Note: **-"*" indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**
-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

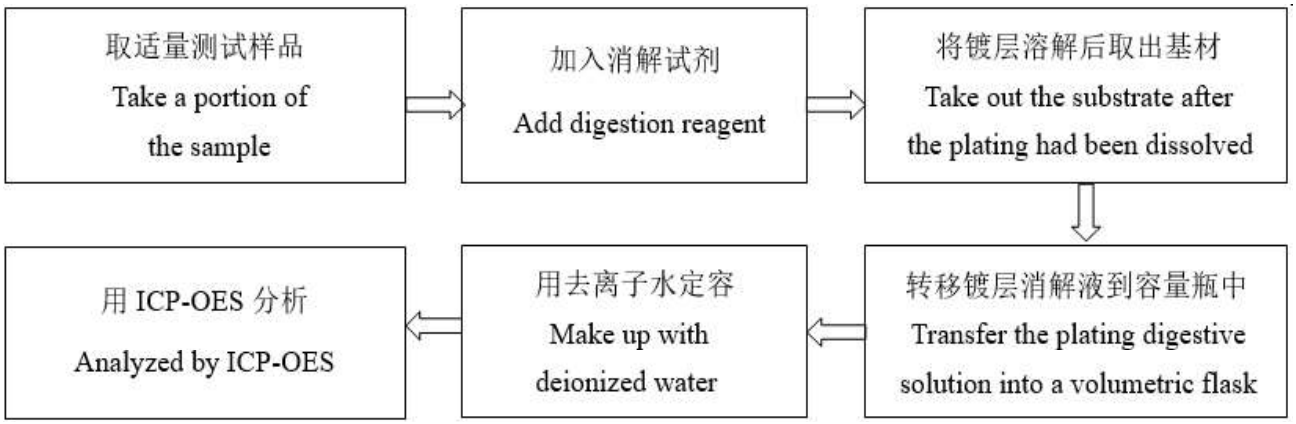
检测报告
Test Report

检测流程 Test Process

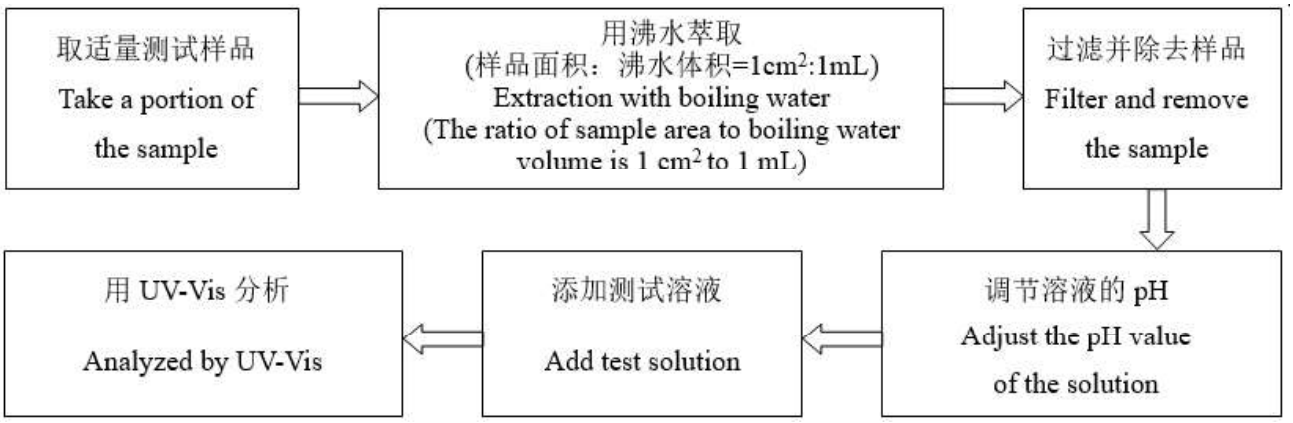
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



2. **汞(Hg)**
   Mercury (Hg)

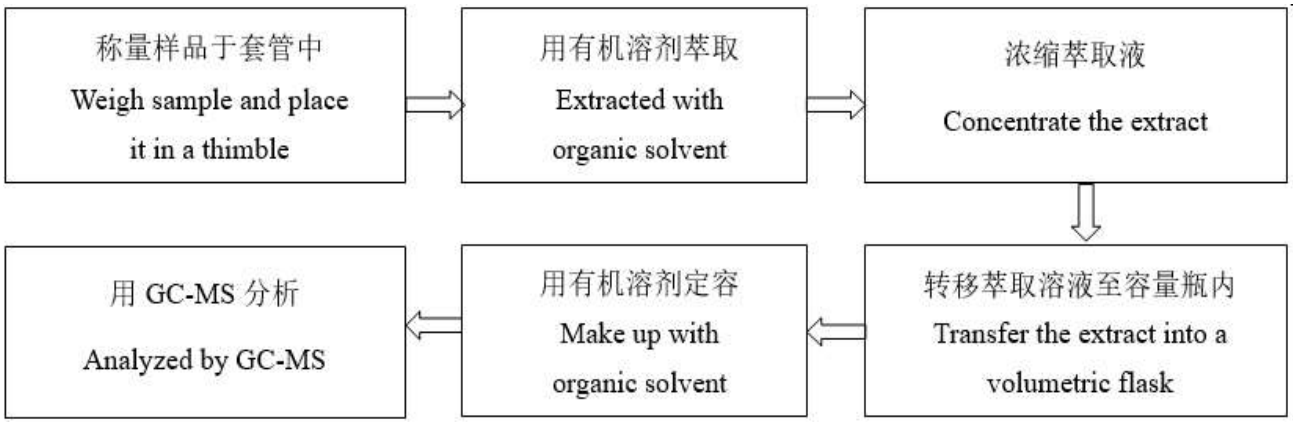


3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))

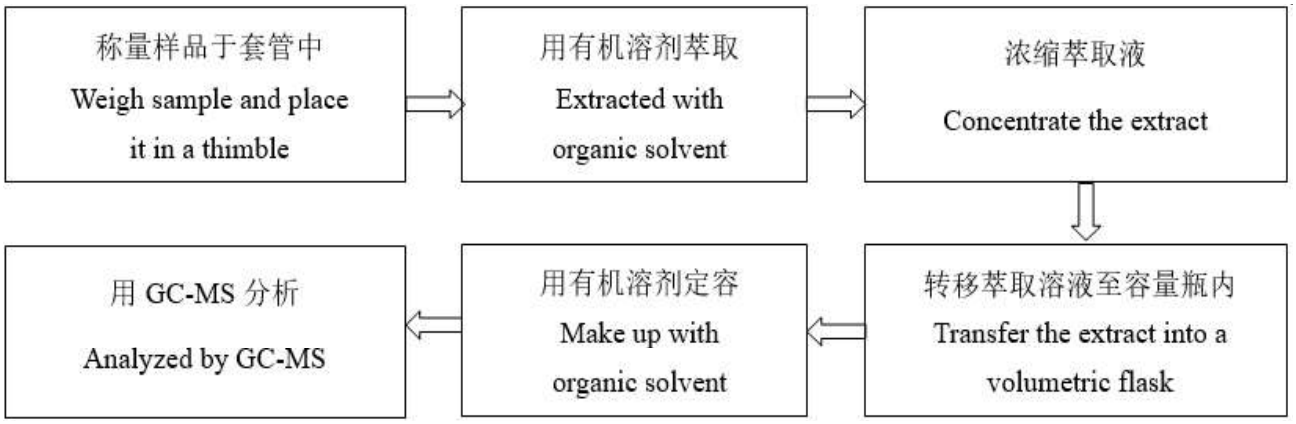


检测报告
Test Report

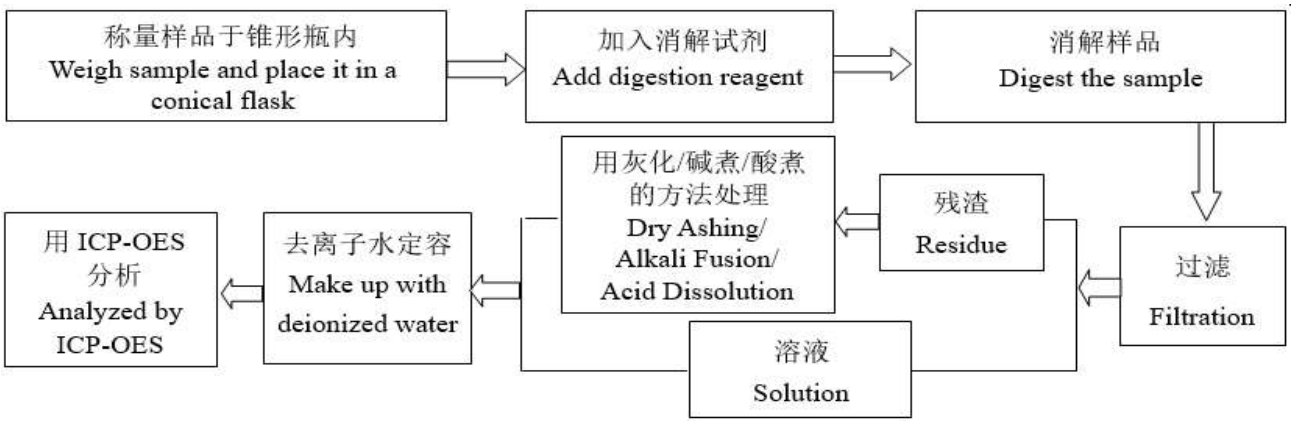
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)
Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



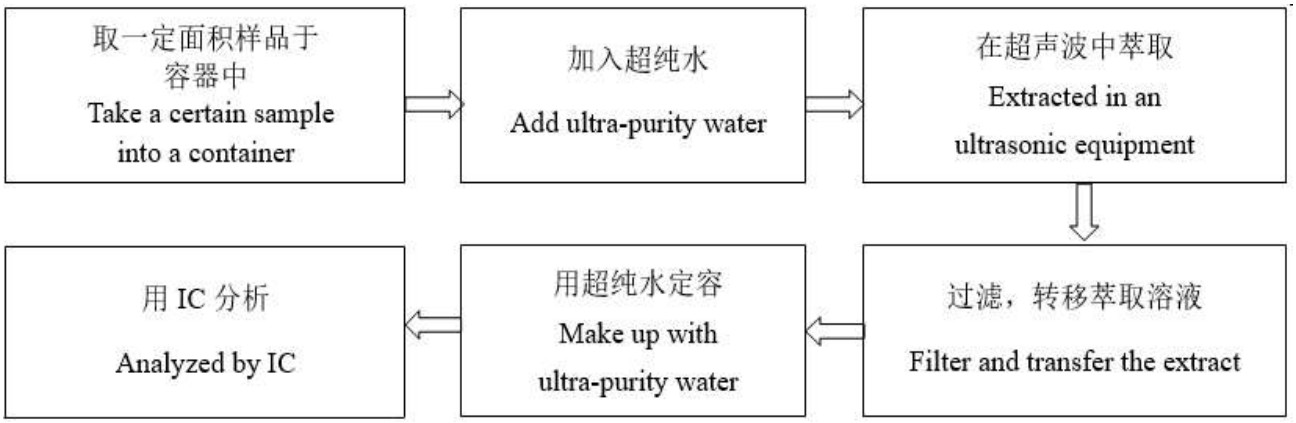
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)
Phthalates (DBP, BBP, DEHP, DIBP)



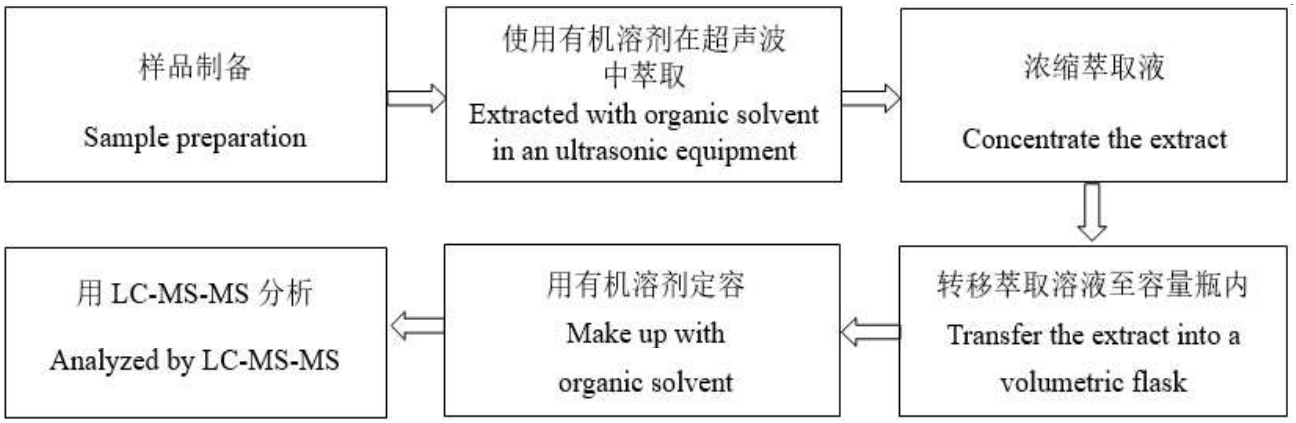
6. 铍(Be)， 锑(Sb)
Beryllium(Be), Antimony(Sb)



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



8. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)
Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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 ***

检测报告
Test Report

报告编号 A2240027156101003E
Report No. A2240027156101003E

报告抬头公司名称 Company Name shown on Report 东莞市全源金属表面处理有限公司 DONGGUAN QUANYUAN METAL SURFACE TREATMENT CO., LTD

地 址 Address 广东省东莞市麻涌镇广麻大道126号71号楼401室 ROOM 401, BUILDING 71, 126 GUANGMA AVENUE, MACHONG TOWN, DONGGUAN CITY, GUANGDONG 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	Sn电镀层
Sample Name	Sn电镀层
样品接收日期	2024.01.15
Sample Received Date	Jan. 15, 2024
样品检测日期	2024.01.15-2024.01.18
Testing Period	Jan. 15, 2024 to Jan. 18, 2024

检测要求 Test Requested

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)，铍(Be)，锑(Sb)，氟(F)，氯(Cl)，溴(Br)，碘(I)，全氟辛酸(PFOA)，全氟辛烷磺酸(PFOS进行测试。

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), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS) in the submitted sample(s).

检测依据/检测结果 Test Method/Test Result(s) 请参见下页。 Please refer to the following page(s).

批 准
Approved by 郑晴涛

郑晴涛
技术经理 Technical Manager

日 期
Date 2024.01.18

No. R338859123

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
锑 Antimony(Sb)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
氟 Fluorine (F)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)*	参考EN 14582:2016 Refer to EN 14582:2016	IC
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
铅 Lead (Pb)	42 mg/kg	2 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
多溴联苯 Polybrominated Biphenyls (PBBs)*		
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
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
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 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
邻苯二甲酸二异丁酯 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
	003	
铍 Beryllium (Be)*	N.D.	2 mg/kg
锑 Antimony (Sb)*	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
氟 Fluorine (F)*	N.D.	1 μg/cm²
氯 Chlorine (Cl)*	N.D.	1 μg/cm²
溴 Bromine (Br)*	N.D.	1 μg/cm²
碘 Iodine (I)*	N.D.	1 μg/cm²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	003	银白色镀层 Silvery white plating

备注: **对于检测铅，镉，汞，铍，锑之样品已消解完全。**
-N.D. = 未检出 (小于方法检出限或定量限)
-mg/kg = ppm = 百万分之一
-LOQ = 定量限, 六价铬的定量限为0.10 μg/cm²
-▼六价铬浓度小于0.10 μg/cm²，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。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Beryllium, Antimony.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL or LOQ)
-mg/kg = ppm = parts per million
-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²
-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 μg/cm². 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.

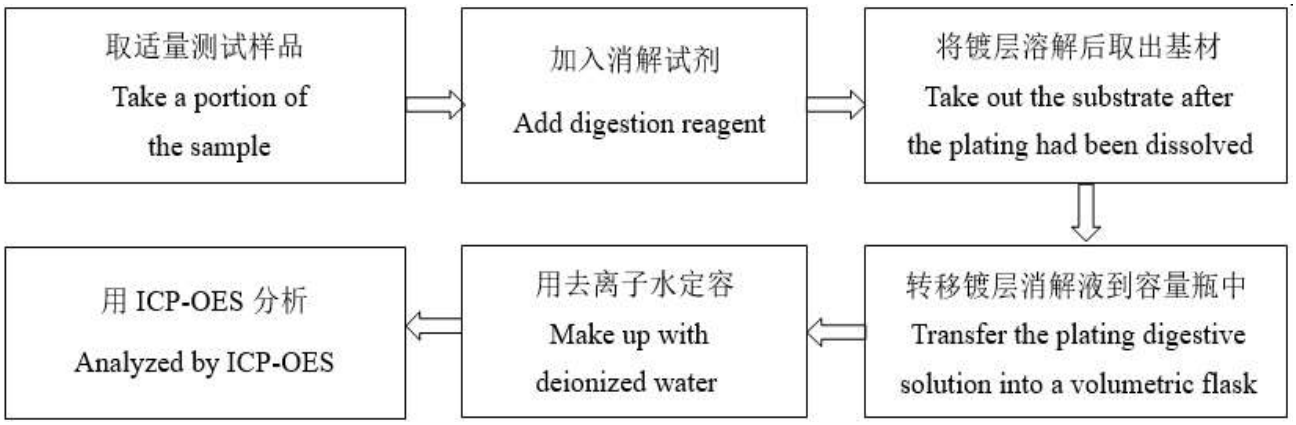
注释: **-"*"表示该项目/方法不在CNAS认可范围内。**
-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

Note: **-"*" indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**
-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

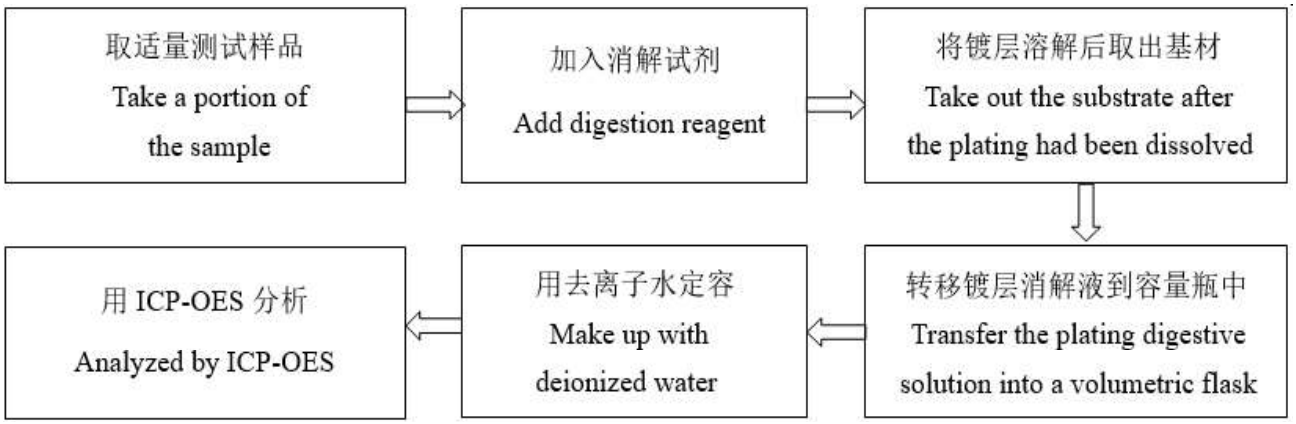
检测报告
Test Report

检测流程 Test Process

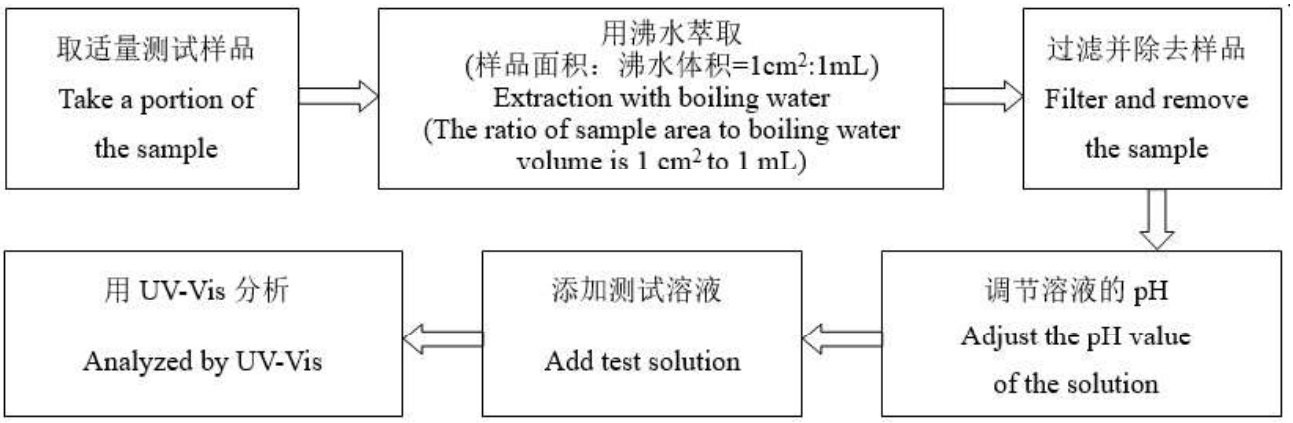
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



2. **汞(Hg)**
   Mercury (Hg)

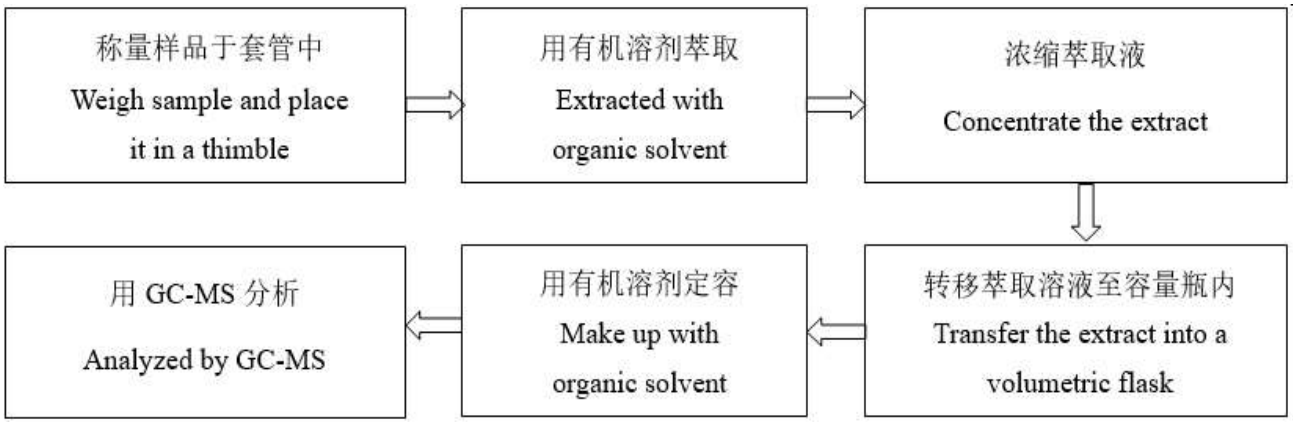


3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))

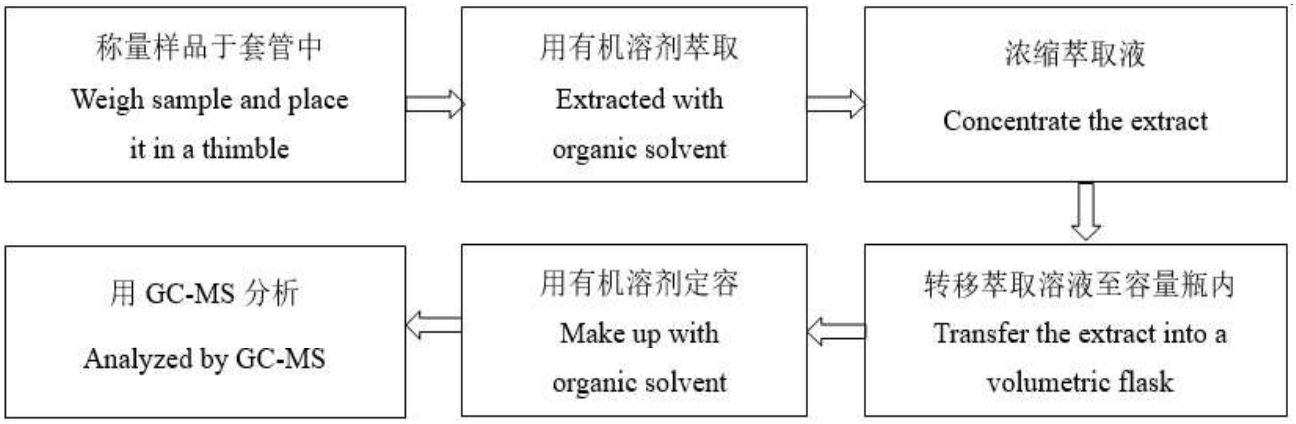


检测报告
Test Report

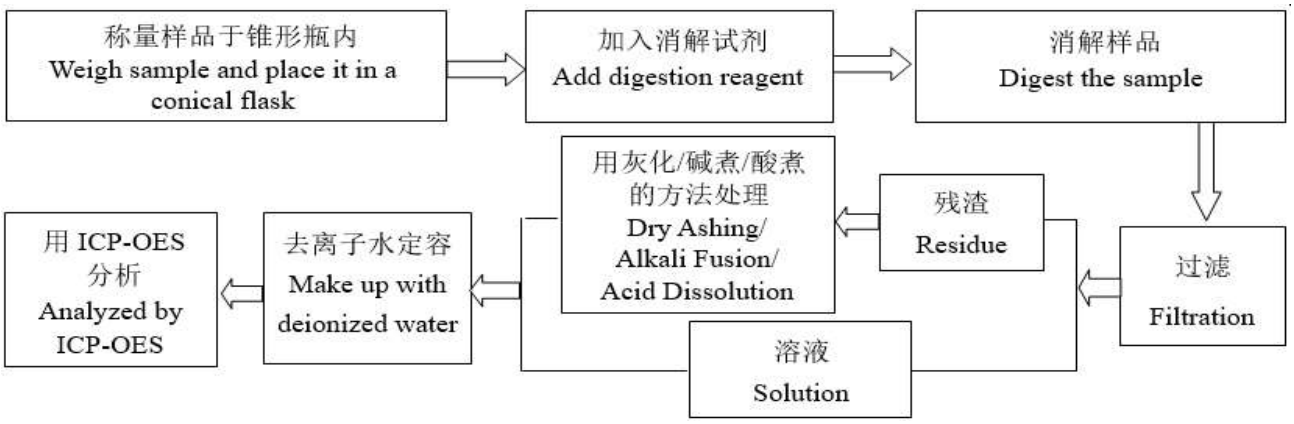
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)
Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



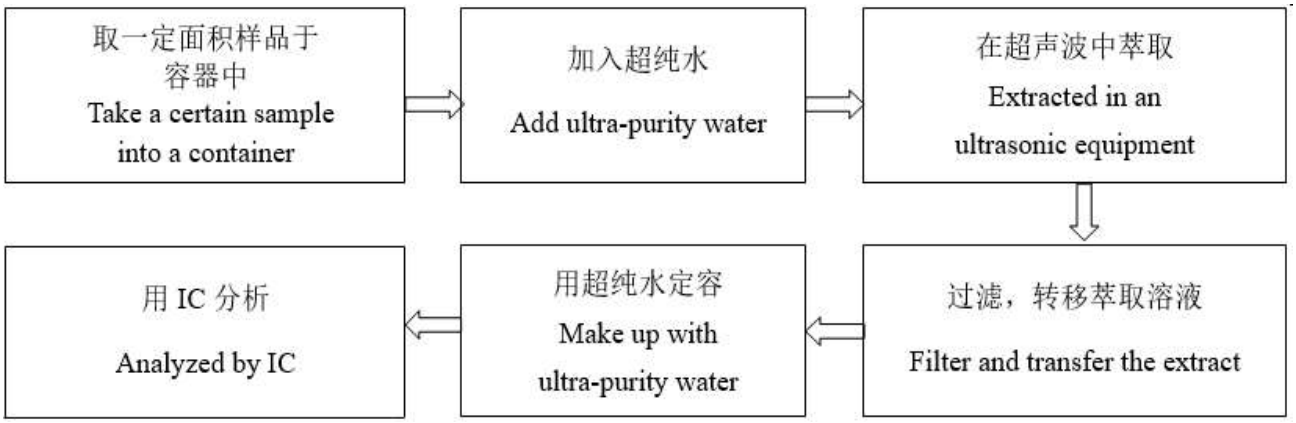
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)
Phthalates (DBP, BBP, DEHP, DIBP)



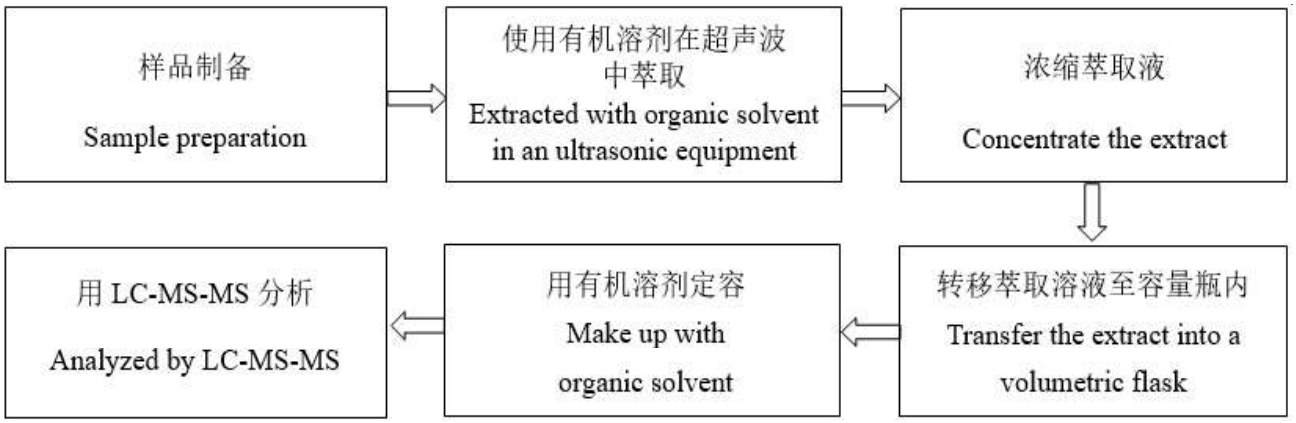
6. 铍(Be)， 锑(Sb)
Beryllium(Be), Antimony(Sb)



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

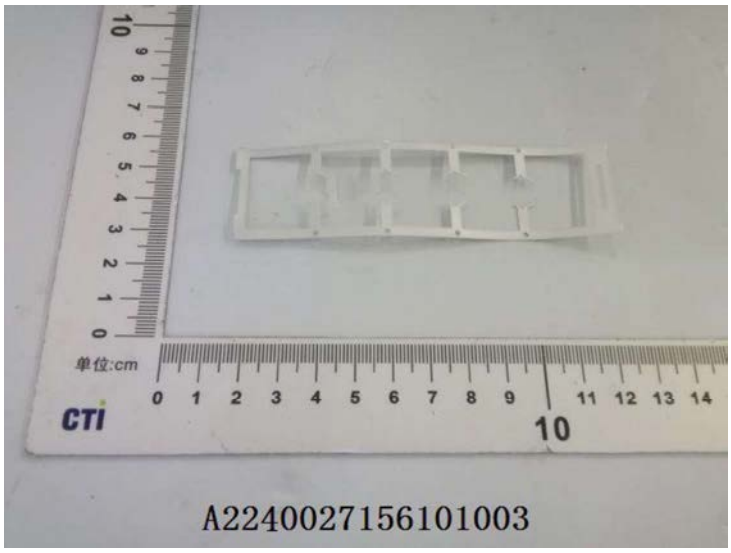


8. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)
Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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 ***

Test Report

No.: SZXEC24000415103 **Date:** Mar 01, 2024

Client Name: ZHONGSHAN WEICHENG ELECTROPLATING CO., LTD

Client Address: NO. 2, JINYUAN ROAD, GAOPING INDUSTRIAL ZONE, SANJIAO TOWN, ZHONGSHAN CITY

Sample Name: NickelPlating

The above sample(s) and information were provided by the client.

SGS Job No.: SZP24-006050

Sample Receiving Date: Feb 27, 2024

Testing Period: Feb 27, 2024 ~ Mar 01, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Ford

Ford Shi
Approved Signatory

scan to see the report
24BF9F6B

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Room 101-301, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	SZX24-0004151-0001.C003	Silvery metal with plating

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A3
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

Test Item(s)	Limit	Unit(s)	MDL	A3
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(DIBP)	1000	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ =
a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 µg/cm^2. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm^2). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 µg/cm^2 and 0.13 µg/cm^2 is considered to be inconclusive-unavoidable coating variations may influence the determination.

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.

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.

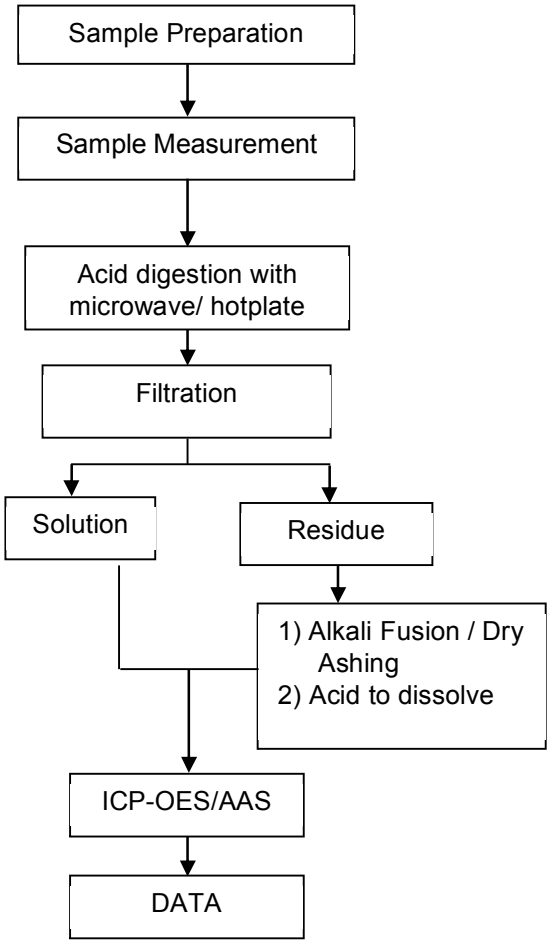
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
Room 101-301, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

ATTACHMENTS

Elements Testing Flow Chart

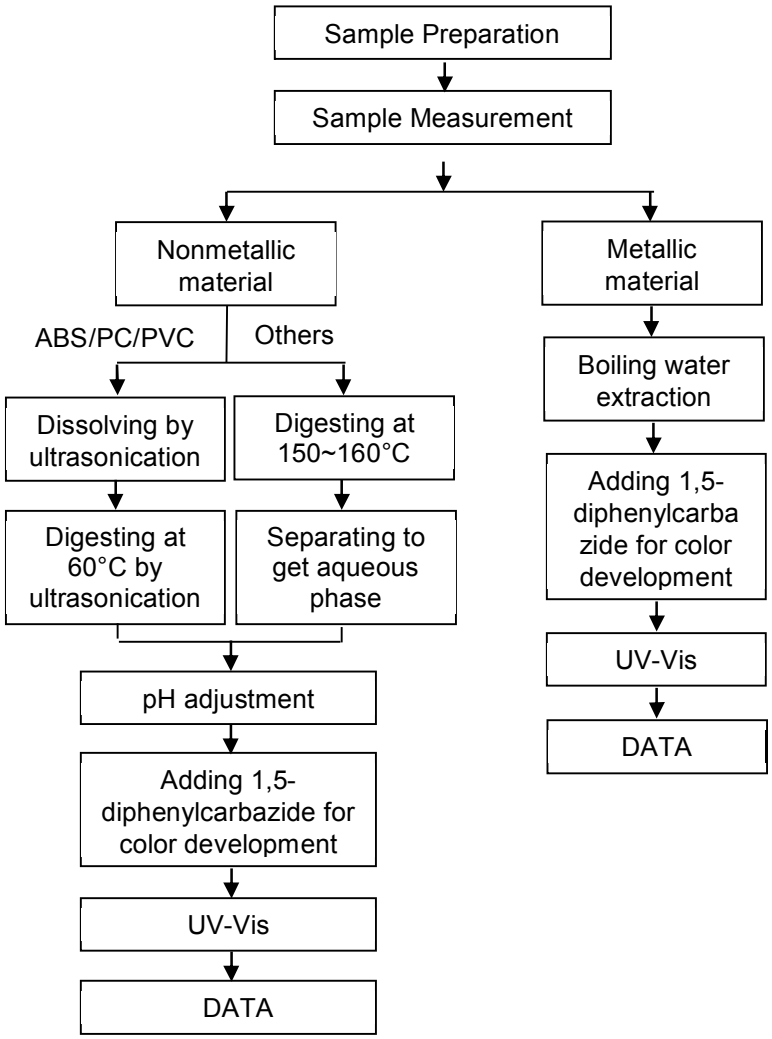
These samples were dissolved totally by pre-conditioning method according to below flow chart.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory
Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

ATTACHMENTS

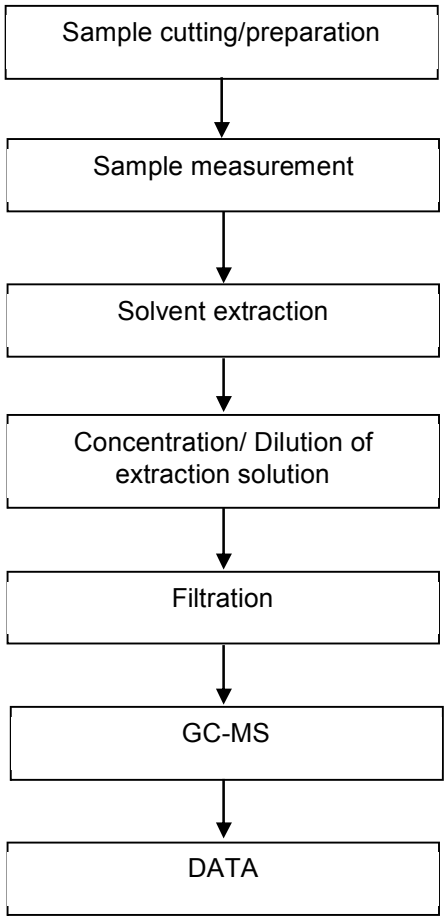
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory
Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

ATTACHMENTS

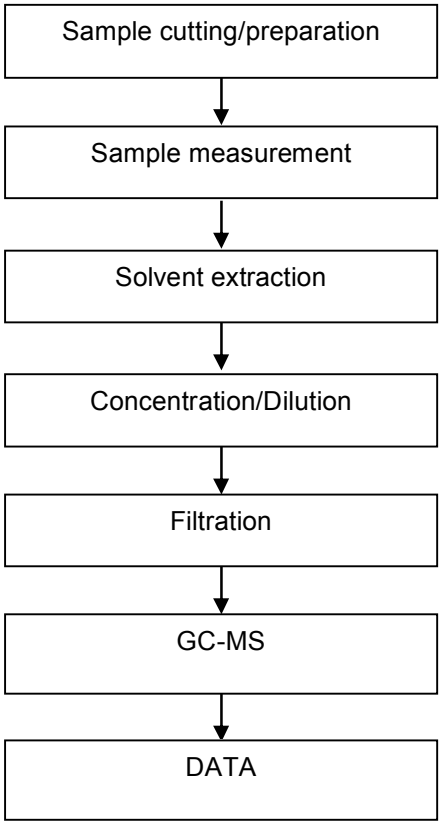
PBB/PBDE Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory
Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

ATTACHMENTS

Phthalates Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory
Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn
中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com
Member of the SGS Group (SGS SA)

Sample Photo:



SZX24-0004151-0001.C003

SGS authenticate the photo on original report only

*** End of Report ***

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 301-501, Plant 3, Jianghao (Bantian) Industrial Plant Area, No. 430, Jihua Road, Bantian Community, Bantian Street, Longgang District, Shenzhen, Guangdong, China 518129 www.sgsgroup.com.cn

中国·广东·深圳市龙岗区坂田街道坂田社区吉华路430号江灏（坂田）工业厂区厂房4号101-901、2号101、3号101、3号301-501 邮编:518129 t (86-755) 25328888 sgs.china@sgs.com

Member of the SGS Group (SGS SA)