

## 承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): SD5209-170B-G618

品名规格 (PronameSpec): 双层 SIM CARD 高度3.0卡座

送样日期 (Delivery Date): 2022/08/03

承认日期 (Acknowledge Date): 2022/08/03

|                                                                                           |                  |                           |                    |
|-------------------------------------------------------------------------------------------|------------------|---------------------------|--------------------|
| Approved No:                                                                              |                  | 客 户<br>Customer           |                    |
| 采 购 部<br>Purchasing Dept                                                                  | 品 质 部<br>QC Dept | 工 程 部<br>Engineering Dept | 确 认<br>Approved By |
|                                                                                           |                  |                           |                    |
| 深 圳 市 华 联 威 电 子 科 技 有 限 公 司<br>SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD. |                  |                           |                    |
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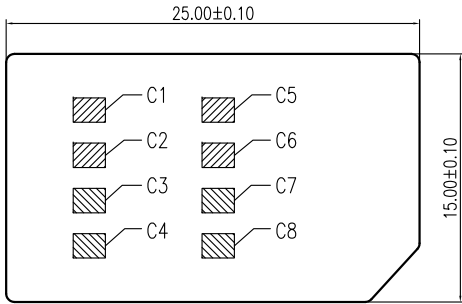
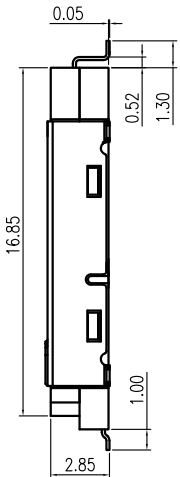
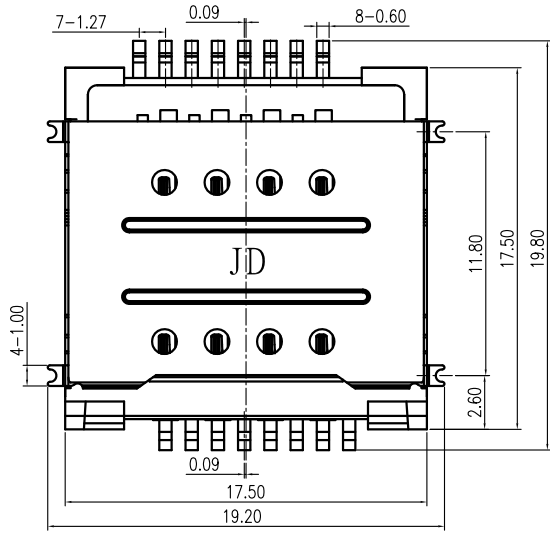
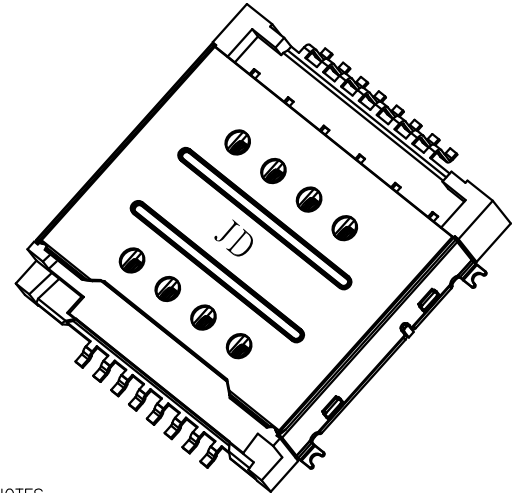
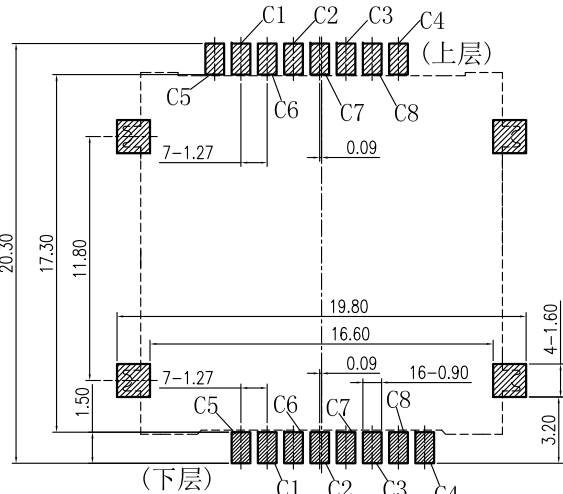
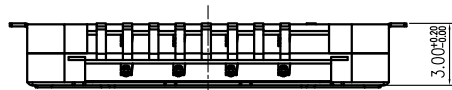
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| REV. | ECN.NO.    | APPD.       |
|------|------------|-------------|
| A    | XXXXXXXXXX | yangguifeng |

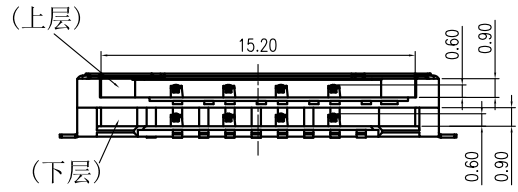
### 双层 SIM CARD CONNECTOR (短上层)



NOTES:  
 1. MATERIAL  
 HOUSING: THERMOPLASTIC, UL94V-0; COLOR: BLACK  
 CONTACT: COPPER ALLOY  
 SHELL: STAINLESS STEEL  
 2. FINISH  
 CONTACT: NICKEL UNDERPLATED AND GOLD PLATING OVER ALL.  
 OR NICKEL UNDERPLATED AND GOLD PLATING ON CONTACT AREA; TIM PLATING ON SOLDER AREA  
 SHELL: NICKEL UNDERPLATED AND GOLD PLATING ON SOLDER AREA.

SD5209-170B-XXX8

G: 半金G/Fu  
 1: 黑色  
 6: LCP



| PIN NO. | PIN NAME |
|---------|----------|
| C1      | VCC      |
| C2      | RST      |
| C3      | CLK      |
| C4      | Reserved |
| C5      | GND      |
| C6      | VPP      |
| C7      | I/O      |
| C8      | Reserved |

| TOLERANCE UNLESS OTHERWISE SPECIFIED |          | FLW 深圳市华联威电子科技有限公司<br>HUA LIAN WEI TECHNOLOGY ELECTRONICS CO;LTD. |             |                    |                  |
|--------------------------------------|----------|-------------------------------------------------------------------|-------------|--------------------|------------------|
| .XXX ±0.10                           | .X' ±3'  | PART NAME:                                                        |             | 双层SIM CARO H3.0 卡座 |                  |
| .XX ±0.20                            | .XX' ±2' | APPROVED                                                          | PART No:    |                    | SD5209-170B-G618 |
| .X ±0.30                             |          | CHECKED                                                           | PROJECTION: |                    | C                |
|                                      |          | DRAWN                                                             | yangguifeng | UNIT:              | mm               |
|                                      |          | DATE                                                              | 2021.12.01  | SCALE              | 1:1              |
|                                      |          |                                                                   |             | SHEET              | 1 OF 1           |
|                                      |          |                                                                   |             | REV.               | A                |

|                                                      |                        |
|------------------------------------------------------|------------------------|
| 深圳市华联威电子科技有限公司<br><br>PRODUCT SPECIFICATION<br>产品规格书 | LANGUAGE<br>语言         |
|                                                      | ENGLISH/CHINESE<br>英/中 |

1. SCOPE[适用范围]

This specification covers the TF CARD PUSH PUSH CONNECTOR SMT TYPE  
 [本规范适用于 TF CARD PUSH PUSH CONNECTOR SMT TYPE ]

2. PRODUCT NUMBER AND PART NAME[产品料号及产品名称]

| Product Name[产品品名]                   | Product Number[产品料号] |
|--------------------------------------|----------------------|
| TF CARD PUSH PUSH CONNECTOR SMT TYPE | C20**-0-****         |
|                                      |                      |
|                                      |                      |
|                                      |                      |

3. CONSTRUCTION & COMPONENTS[构造&组成零件]

Based on construction drawing[依照工程图]

4. RATINGS[标准额定值]

| Item[项目]                       | Standard[规格]          |
|--------------------------------|-----------------------|
| Rated voltage[额定电压]            | 30V AC                |
| Rated current[额定电流]            | 0.5A                  |
| Operating temperature[使用温湿度环境] | -25℃~+85℃, 85% RH Max |
| Storage temperature[储存温湿度环境]   | -40℃~+85℃, 85% RH Max |

5. TEST CONDITION[试验条件]

The test and measurement, unless otherwise specified, shall be carry out at a temperature of 15 to 35℃,

Relative humidity of 25 to 85%, and atmospheric of 86 to 106kPa.

However, when any doubt arises on the judgment value it, the test and measurement shall be carry out at a temperature of 20±2℃, relative humidity of 60 to 70%, and atmospheric pressure of 86 to 106Pa.

[除非特别说明之外，一般试验及测理将于温度15~35℃，相对湿度25~85%，大气压力86~106kPa之条件下完成，但若于上述条件下有任何影响判定值的疑虑，可考量在温度20±2℃，相对湿度60~70%，大气压力86~106kPa之条件下完成试验

Appearance: By looking, there shall not be any abnormality such as deformity, exfoliation of plating, ETC, which can reduce performance, No defect such as cracks scratches or blemishes.  
 [外观：经目视观察，外观不可有变形，电镀脱落等会降低其功能的异常现象，也不可有严重破裂，刮伤或污损之缺点。]

|                          |     |                                                    |    |
|--------------------------|-----|----------------------------------------------------|----|
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| SHEET<br>页码              | 2/6 | REV. /版本                                           | A0 |

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|                                                      | ENGLISH/CHINESE<br>英/中 |

6. ELECTRICAL EFFICIENCY [电气特性]

| NO. 编号 | Item/项目                         | Test Method/试验方法                                                                                                                      | Requirement /性能要求                                              |
|--------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 6.1    | Contact Resistance<br>[接触阻抗]    | Mate connectors,<br>Measure by dry circuit, 20mV Max, 100mA<br>[公母对插后测试]<br>{EIA-364-23}                                              | contact pin: 100mΩ Max<br>100mΩ 以下                             |
| 6.2    | Insulation Resistance<br>[绝缘阻抗] | Unmated connectors, apply 500V DC between adjacent terminal or ground.<br>[公母不对插, 对相邻端子施加500V DC电压测试]<br>{EIA-364-21}                 | 100MΩ Min<br>(unmated)                                         |
| 6.3    | Withstanding Voltage<br>[耐电压]   | Unmated connectors, apply 500V AC for 1 minute between adjacent terminal or ground.<br>[公母对插前对各端子施加500V AC电压持续1分钟测试.]<br>{EIA-364-20} | No Breakdown<br>Current leakage: 1mA Max.<br>无击穿<br>漏电流: 1mA以下 |

7. MECHANICAL EFFICILENCY [机械特性]

|     |                               |                                                                                                                                                      |                                            |                           |
|-----|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------|
| 7.1 | Mating force<br>[插入力]         | Measure mating force necessary to mate connector.<br>Operation speed: 25mm/minute<br>[测试一组公母对插之连接器所需之插入力, 测试速度25mm/分钟]<br>{EIA-364-13}               | 0.5 Kgf (4.9 N)~1.2 Kgf (11.76 N)          |                           |
| 7.2 | Card Ejection Force<br>[退卡弹力] | EIA 364-13<br>Shall be measured with TENSION GAUGE or TENSION TESTER<br>Measure force necessary to mate samples at maximum rate of 25.4mm per minute | 0.5 Kgf (4.9 N)~1.2 Kgf (11.76 N)          |                           |
| 7.3 | Contact retention<br>[端子保持力]  | Apply axial pull out force on the terminal assembled in the housing<br>Operation speed: 25mm/minute<br>[测试将端子由本体中拉出之保持力, 测试速度25mm/分钟]                | 1.47N {0.15kgf} Min.<br>1.47N {0.15kgf} 以上 |                           |
| 7.4 | Durability<br>[耐久性]           | Mated and unmated connectors up to 10000 cycles at a rate of 400~600 cycles per hour<br>[连接器在400~600次/小时的插拔速度下必须承受10000次的插拔循环]                       | Contact Resistance<br>接触阻抗                 | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |

|                          |     |                                                    |    |  |
|--------------------------|-----|----------------------------------------------------|----|--|
| P/N: C20**-0-****<br>料号: |     | TITLE: TF CARD PUSH PUSH CONNECTOR SMT TYPE<br>品名: |    |  |
| SHEET<br>页码              | 3/6 | REV. /版本                                           | A0 |  |

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8. ENVIRONMENTAL EFFICIENCY AND OTHERS [环境及其它特性]

| NO. 编号 | Item/项目                                         | Test Method/试验方法                                                                                                                                                                                                                                                                           | Requirement /性能要求             |                           |
|--------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|
|        |                                                 |                                                                                                                                                                                                                                                                                            |                               |                           |
| 8.1    | Humidity Test<br>[耐湿性测试]                        | Temperature:60±2℃,<br>Relative Humidity:90%<br>Duration:96 hours<br>Upon completion of the test,specimens shall be conditioned at ambient room conditions for 1~2 hours<br>[温度在60±2℃,相对湿度90%,持续96小时,经试验后,连接器于室温中放置1~2小时再测试其它值]<br>{EIA-364-31<br>Test condition A method III}              | Appearance<br>外观              | NO damage<br>不可破坏         |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Contact Resistance<br>接触阻抗    | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Insulation Resistance<br>绝缘阻抗 | 100MΩ Min.<br>100MΩ 以上    |
| 8.2    | Salt mist spray<br>[盐水喷雾测试]                     | Salt concentration:5%;<br>Temperature:35±2℃;<br>Testing time:8 hours<br>After salt is removed by running water and a drop is removed,it is measured.<br>[盐水比重:5%,温度:35±2℃,试验时间72小时,试验后用清水将残留盐份清洗,并将水滴清除后,方可再测试其它值]<br>{EIA-364-26A,condition A}                                            | Appearance<br>外观              | NO damage<br>不可破坏         |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Contact Resistance<br>接触阻抗    | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |
| 8.3    | Vibration<br>(Low frequency)<br>[振动测试]<br>(低周波) | Amplitude:1.52mm.<br>Sweep time:10~55~10Hz<br>Duration:2 hours in each X,Y,Z axes.<br>(total of 6 hours)<br>Electrical load:10mA<br>[振幅:1.52mm,振动频率:10~55~10Hz,振动时间:X、Y、Z轴各2小时共计6小时,载入电流:10mA]<br>{EIA-364-28 Test condition V test letter A}                                              | Appearance<br>外观              | NO damage<br>不可破坏         |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Contact Resistance<br>接触阻抗    | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Discontinuity<br>瞬断           | 1 μ Sec. Max              |
| 8.4    | Dropping Test<br>[跌落测试]                         | Status:One carton of products<br>Dropping plane:The wood block(or the coordinate condition)<br>Height:1.5m<br>Directions:Each of X,Y, and Z-axes directions<br>No of times: each two times<br>Dropping way:dropped normally<br>[状态:运输包装状态,落下平面:坚固地面,落下高度:1.5m,落下方向:X-Y-Z,次数:各2次,落下方法:自由落下] | Appearance<br>外观              | NO damage<br>不可破坏         |
| 8.5    | Thermal shock<br>[冷热冲击测试]                       | Mated connentor with dummy card and perform the test as follows.<br>25 cycle of: A)-25℃ for 30 minutes;<br>B)+85℃ for 30 minutes<br>[将连接器与仿真卡对插后,做25个循环,每个循环条件为:-25℃,30分钟;+85℃,30分钟]<br>{EIA-364-32, Condition I}                                                                          | Appearance<br>外观              | NO damage<br>不可破坏         |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Contact Resistance<br>接触阻抗    | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |
| 8.6    | Heat test<br>[耐热性测试]                            | Mated connentor with dummy card, test on 85℃ for 96 hours. After testing it shall be left alone for 1 to 2 hours in room ambient.<br>[将连接器与仿真卡对插后,测试条件:温度85℃,时间96小时;结束后将其放置于室温下1~2小时再测试其他值]                                                                                                | Appearance<br>外观              | NO damage<br>不可破坏         |
|        |                                                 |                                                                                                                                                                                                                                                                                            | Contact Resistance<br>接触阻抗    | ΔR=40mΩ Max<br>ΔR=40mΩ 以下 |

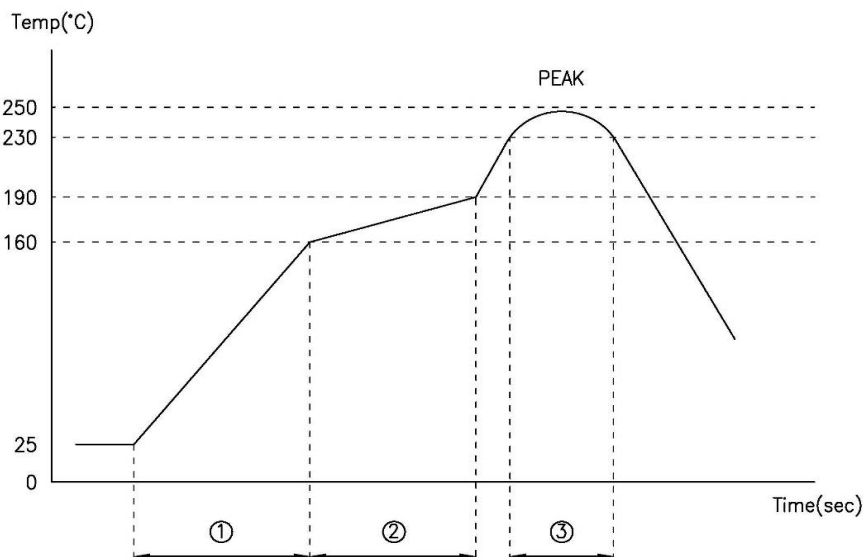
|                          |     |                                                    |    |
|--------------------------|-----|----------------------------------------------------|----|
| P/N: C20**-0-****<br>料号: |     | TITLE: TF CARD PUSH PUSH CONNECTOR SMT TYPE<br>品名: |    |
| SHEET<br>页码              | 4/6 | REV./版本                                            | A0 |

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|                                                      | ENGLISH/CHINESE<br>英/中 |

8. ENVIRONMENTAL EFFICIENCY AND OTHERS [环境及其它特性]

| NO. 编号 | Item/项目                                 | Test Method/试验方法                                                                                                                                                                                                       | Requirement /性能要求                     |                                                     |
|--------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------|
| 8.7    | Cold test<br>[耐寒性测试]                    | Mated connentor with dummy card, test on -40℃ for 96 hours. After testing it shall be left alone for 1 to 2 hours in room ambient.<br>[将连接器与仿真卡对插后, 测试条件: 温度-25℃, 时间96小时; 结束后将其放置于室温下1~2小时再测试其他值]                      | Appearance<br>外观                      | NO damage<br>不可破坏                                   |
|        |                                         |                                                                                                                                                                                                                        | Contact Resistance<br>接触阻抗            | $\Delta R=40m\Omega$ Max<br>$\Delta R=40m\Omega$ 以下 |
| 8.8    | Solderability<br>[焊锡性测试]                | Soldering time:3 second Max. (Use flux)<br>Solder Temperature:255±2℃<br>[焊锡时间: 5秒以下(使用助焊剂), 焊锡温度: 255±2℃ {EIA-364-52}]                                                                                                 | 95% min. of soder area<br>[焊锡面积最小95%] |                                                     |
| 8.9    | Resistance to Soldering Heat<br>[焊锡耐热性] | Soldering Iron method<br>Using the soldering iron, and the cored solder wire. It is applied to termination for 3+1/-0s at 350±5℃.<br>[手工焊接]<br>[使用烙铁和芯线, 焊锡温度为255±5℃, 时间为3+1/-0s]                                      | Appearance<br>外观                      | NO damage<br>不可破坏                                   |
|        |                                         | IR-reflow Soldering method<br>Test connector on PCB.<br>Pre-heat: 160~190℃; 120seconds<br>Heat: 230℃ Min; 40seconds<br>Heat Peak: 250℃ Max<br>[回流焊接]<br>[组装在PCB上做测试, 预热: 160~190℃; 120秒; 加热: 230℃以上; 40秒 最高温度: 250℃以下] | Appearance<br>外观                      | NO damage<br>不可破坏                                   |

Temperature Profile IR-Reflow Soldering:



|                                               |                           |
|-----------------------------------------------|---------------------------|
| Pre-Heating Zone ①; Temperature rise 1~4℃/sec | ① 预热部分: 升温1~4℃/sec        |
| Pre-Heating Zone ②; 160~190℃ 120sec           | ② 预热部分: 160~190℃ 120sec以内 |
| Soldering Zone ③; Forty seconds over 230℃     | ③ 焊锡加热部分: 230℃以上 40sec以内  |
| PEAK temperature; Below 250℃                  | PEAK温度: 250℃以下            |

|                          |                                                    |          |    |
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| SHEET<br>页码              | 5/6                                                | REV. /版本 | A0 |

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|                                                      | ENGLISH/CHINESE<br>英/中 |

9. TEST SEQUENCES [测试顺序]

| Test or Examination<br>测试/检查 |                                       | Test Group<br>测试组别 |      |      |      |      |      |      |      |      |   |      |
|------------------------------|---------------------------------------|--------------------|------|------|------|------|------|------|------|------|---|------|
| NO.                          | Item/项目                               | A                  | B    | C    | D    | E    | F    | G    | H    | I    | J | K    |
| XX                           | Examination of product/产品确认           | 1                  | 1    | 1, 6 | 1, 5 | 1, 5 | 1, 3 | 1, 5 | 1, 5 | 1, 5 | 1 | 1, 3 |
| 6. 1                         | Contact Resistance/接触阻抗               | 2                  | 2, 6 | 2, 4 | 2, 4 | 2, 4 |      | 2, 4 | 2, 4 | 2, 4 |   |      |
| 6. 2                         | Insuation Resistance/绝缘阻抗             | 3                  |      | 5    |      |      |      |      |      |      |   |      |
| 6. 3                         | Withstanding Voltage/耐电压              | 4                  |      |      |      |      |      |      |      |      |   |      |
| 7. 1                         | Insertion force/插入力                   |                    | 3    |      |      |      |      |      |      |      |   |      |
| 7. 2                         | Push in strength/弹簧弹力                 |                    | 4    |      |      |      |      |      |      |      |   |      |
| 7. 3                         | Contact retention/端子保持力               | 5                  |      |      |      |      |      |      |      |      |   |      |
| 7. 4                         | Durability/耐久性                        |                    | 5    |      |      |      |      |      |      |      |   |      |
| 8. 1                         | Humidity Test/耐湿性测试                   |                    |      | 3    |      |      |      |      |      |      |   |      |
| 8. 2                         | Salt mist spray/盐水喷雾测试                |                    |      |      | 3    |      |      |      |      |      |   |      |
| 8. 3                         | Vibration/振动测试                        |                    |      |      |      | 3    |      |      |      |      |   |      |
| 8. 4                         | Dropping Test/跌落测试                    |                    |      |      |      |      | 2    |      |      |      |   |      |
| 8. 5                         | Thermal shock/冷热冲击测试                  |                    |      |      |      |      |      | 3    |      |      |   |      |
| 8. 6                         | Heat test/耐热性测试                       |                    |      |      |      |      |      |      | 3    |      |   |      |
| 8. 7                         | Cold test/耐寒性测试                       |                    |      |      |      |      |      |      |      | 3    |   |      |
| 8. 8                         | Solderability/焊锡性测试                   |                    |      |      |      |      |      |      |      |      | 2 |      |
| 8. 9                         | Resistance to Soldering Heat<br>焊锡耐热性 |                    |      |      |      |      |      |      |      |      |   | 2    |

|                          |     |                                                    |    |
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| P/N: C20**-0-****<br>料号: |     | TITLE: TF CARD PUSH PUSH CONNECTOR SMT TYPE<br>品名: |    |
| SHEET<br>页码              | 6/6 | REV. /版本                                           | A0 |



## 測試報告

## TEST REPORT

|              |                       |                         |            |                         |                                      |
|--------------|-----------------------|-------------------------|------------|-------------------------|--------------------------------------|
| 產品名稱<br>Part | 双层 SIM CARD 高度 3.0 卡座 | 測試日期<br>Date of Testing | 2022.08.02 | 報告編號<br>Report NO.      | MD20220802-01                        |
| 產品型號<br>Part | SD5209-170B-G618      | 樣品數量<br>Quantity        | 5PCS       | 測試環境<br>Date of Testing | 濕度 Temp:18~21°C<br>相對濕度 R.H.:49%~57% |

### 一. 電性測試 ELECTRICAL TEST

| 序號<br>NO | 測試項目<br>Testing Item | 測試條件<br>Testing Conditions | 測試設備<br>Testing Equipments | 規格<br>SPEC        | 測試記錄 Testing Result |                |                |                |                 | 判定<br>Judge |    |
|----------|----------------------|----------------------------|----------------------------|-------------------|---------------------|----------------|----------------|----------------|-----------------|-------------|----|
|          |                      |                            |                            |                   | 1                   | 2              | 3              | 4              | 5               | OK          | NG |
| 1        | 接觸阻抗                 | 100 m Ohm                  | 直流低電阻<br>測試儀               | 100 m Ohm<br>Max  | 90.2m<br>Ohm Ω      | 89.8m<br>Ohm Ω | 91.5m<br>Ohm Ω | 92.0m<br>Ohm Ω | 18.53m<br>Ohm Ω | V           |    |
| 2        | 絕緣阻抗                 | 1000 M Ohm VDC             | 絕緣電阻<br>測試儀                | 1000 M Ohm<br>Min | Pass                | Pass           | Pass           | Pass           | Pass            | V           |    |
| 3        | 耐壓測試                 | 500V AC /<br>0.5 mA 1分钟    | 耐壓測試儀                      | No damaged        | OK                  | OK             | OK             | OK             | OK              | V           |    |

### 二. 机械特性測試 MECHANICAL TEST

| 序號<br>NO | 測試項目<br>Testing Item | 測試條件<br>Testing Conditions                  | 測試設備<br>Testing Equipments | 規格<br>SPEC    | 測試記錄 Testing Result |      |      |      |      | 判定<br>Judge |    |
|----------|----------------------|---------------------------------------------|----------------------------|---------------|---------------------|------|------|------|------|-------------|----|
|          |                      |                                             |                            |               | 1                   | 2    | 3    | 4    | 5    | OK          | NG |
| 4        | 插入力                  | 每分钟25±3mm<br>的速度                            | 插拔力計                       | 40 Max.       | 36N                 | 35N  | 32N  | 30N  | 29N  | V           |    |
| 5        | 拔出力                  | 每分钟25±3mm<br>的速度                            | 插拔力計                       | 1N Min        | 1.2N                | 1.4N | 1.5N | 1.1N | 1.3N | V           |    |
| 6        | 耐久性                  | 测试速度：每分<br>钟5个<br>循环，测试次<br>数：5000次循<br>环最少 | 插拔力計                       | 不得发生物理<br>损坏。 | OK                  | OK   | OK   | OK   | OK   | V           |    |

### 三. 环境特性测试 ENVIRONMENTAL TEST

| 序號<br>NO | 測試項目<br>Testing Item | 測試條件<br>Testing Conditions                                                  | 測試設備<br>Testing Equipments | 規格<br>SPEC    | 測試記錄 Testing Result |    |    |    |    | 判定<br>Judge |    |
|----------|----------------------|-----------------------------------------------------------------------------|----------------------------|---------------|---------------------|----|----|----|----|-------------|----|
|          |                      |                                                                             |                            |               | 1                   | 2  | 3  | 4  | 5  | OK          | NG |
| 7        | 冷热冲击                 | 55+/-3°C (30 分<br>钟), +85+/-<br>2°C (30 分 钟)<br>为一个中期的<br>环境中, 重复<br>10 个周期 | 高低温试验<br>箱                 | 不得发生物理<br>损坏。 | OK                  | OK | OK | OK | OK | V           |    |

|                          |            |                                                                                           |       |                |    |    |    |    |    |   |  |
|--------------------------|------------|-------------------------------------------------------------------------------------------|-------|----------------|----|----|----|----|----|---|--|
| 8                        | 湿温循环       | 温度25~65℃，<br>湿90~95%，持<br>续时间:4qw                                                         | 湿温循环机 | 最大接触阻抗<br>30mΩ | OK | OK | OK | OK | OK | V |  |
| 9                        | 盐雾试验       | 温度:35±2℃<br>12小时                                                                          | 盐雾试验箱 | 最大接触阻抗<br>50mΩ | OK | OK | OK | OK | OK | V |  |
| 10                       | 可焊性        | 焊锡温度:<br>260±5℃                                                                           | 熔锡炉   | 沾锡面积达<br>90%以上 | OK | OK | OK | OK | OK | V |  |
| 11                       | 焊接耐热<br>试验 | 260±5℃<br>10秒                                                                             | 工业烘烤箱 | 不得发生物理<br>损坏   | OK | OK | OK | OK | OK | V |  |
|                          |            |                                                                                           |       |                |    |    |    |    |    |   |  |
| 綜合判定<br>TEST<br>JUDGMENT |            | <input checked="" type="checkbox"/> 合格 (Acceptable) <input type="checkbox"/> 不合格 (Reject) |       |                |    |    |    |    |    |   |  |

## 檢驗報告

首件檢驗
 入庫檢驗
 出貨檢驗
 客退檢驗
 退料檢驗
 其他

2022年08月03日 版次:A1

|                                    |                    |                                                                                                |   |                 |         |                |          |   |
|------------------------------------|--------------------|------------------------------------------------------------------------------------------------|---|-----------------|---------|----------------|----------|---|
| 料號                                 | SD5209-170B-G618   | 制令單號                                                                                           | / | 送檢單位            | 工程部     | 首件製作者          | 裝配       |   |
| 品名                                 | 双层SIM CARD 高度3.0卡座 | 客戶代號                                                                                           | / | 批 量             | /       | 送檢時間           | /        |   |
|                                    |                    |                                                                                                |   | 數 量             | 5PCS    | 確認時間           | /        |   |
| 抽樣標準                               |                    | <input checked="" type="checkbox"/> 單次 <input type="checkbox"/> 雙次                             |   | 抽樣數<br>( 5PCS ) | AQL     | CRI:0 MAJ:0.40 | MIN:0.65 |   |
| MIL-STD-105E(II)                   |                    | <input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量 |   |                 | ACC/REJ | 0              | /        | / |
| 不良數: CRI ( / ) MAJ ( / ) MIN ( / ) |                    |                                                                                                |   |                 |         | 不良率(%)         |          | / |

| NO. | 檢驗項目<br>單位:MM/G | 檢測<br>儀器 | 檢 驗 記 錄 |       |       |       |       | 品管判定 |    | CRI | MAJ | MIN | 備注 |
|-----|-----------------|----------|---------|-------|-------|-------|-------|------|----|-----|-----|-----|----|
|     |                 |          | 1       | 2     | 3     | 4     | 5     | AC   | RE |     |     |     |    |
|     | 1.27±0.20       | D        | 1.29    | 1.26  | 1.25  | 1.26  | 1.25  | √    |    |     |     |     |    |
|     | 17.50±0.20      | D        | 17.56   | 17.58 | 17.54 | 17.56 | 17.54 | √    |    |     |     |     |    |
|     | 19.20±0.20      | D        | 19.25   | 19.27 | 19.26 | 19.25 | 19.27 | √    |    |     |     |     |    |
|     | 19.80±0.20      | D        | 19.85   | 19.87 | 19.86 | 19.85 | 19.84 | √    |    |     |     |     |    |
|     | 16.85±0.20      | D        | 16.85   | 16.87 | 16.86 | 16.85 | 16.87 | √    |    |     |     |     |    |
|     | 1.30±0.20       | D        | 1.34    | 1.36  | 1.35  | 1.34  | 1.36  | √    |    |     |     |     |    |
|     | 2.85±0.20       | D        | 2.89    | 2.87  | 2.84  | 2.85  | 2.86  | √    |    |     |     |     |    |
|     | 1.00±0.20       | D        | 1.03    | 1.05  | 1.02  | 1.06  | 1.03  | √    |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |

 檢驗依據: 《工程圖紙》 《檢驗規範》 《承認書》 樣品 其它

檢測儀器:A游標卡尺 B千分尺 C厚薄儀 D投影鏡 E放大鏡 F顯微鏡 G錫爐 H插拔力器 I間位尺 J其它

品保判定:

|            |     |            |   |               |    |
|------------|-----|------------|---|---------------|----|
| 核 准<br>APP | 欠必鋒 | 審 核<br>CHK | / | 檢驗員<br>INSPBY | 但芬 |
|------------|-----|------------|---|---------------|----|

保存期限:三年

保存部門:品保部

QR-M-003



电镀报告表

品名:双层SIM CARD 高度3.0卡座 版次:A.0

电镀规格:Ni:50u" min 日期:2022/01/14 页次:1/1

厂商:金和源

测试设备:CMI X-射线膜厚测试仪

1、表层电镀测试 (Ni)

| 数据 | 测试标准    | 实测值    | 判定 | 测试日期      | 测试时间     |
|----|---------|--------|----|-----------|----------|
| 1  | 50u"min | 55.3u" | OK | 2022/1/14 | 10:42:14 |
| 2  | 50u"min | 57.6u" | OK | 2022/1/14 | 10:42:16 |
| 3  | 50u"min | 56.4u" | OK | 2022/1/14 | 10:42:18 |
| 4  | 50u"min | 52.5u" | OK | 2022/1/14 | 10:42:20 |

核准: 欠必锋

审核: 刘联英

检验员: 但芬

## 电镀报告表

|                               |          |               |        |           |          |
|-------------------------------|----------|---------------|--------|-----------|----------|
| 品名:双层SIM CARD 高度3.0卡座(端子)     |          |               |        |           |          |
| 电镀规格:Ni40u", Sn40u", Au G/Fu" |          | 日期:2022/01/14 | 页次:1/1 |           |          |
| 厂商:同华                         |          |               |        |           |          |
| 测试设备:CMI X-射线膜厚测试仪            |          |               |        |           |          |
| 1、底层电镀测试 (Ni)                 |          |               |        |           |          |
| 数据                            | 测试标准     | 实测值           | 判定     | 测试日期      | 测试时间     |
| 1                             | 40u"MIN  | 45.3u"        | OK     | 2022/1/14 | 13:50:12 |
| 2                             | 40u"MIN  | 48.5u"        | OK     | 2022/1/14 | 13:50:14 |
| 3                             | 40u"MIN  | 44.2u"        | OK     | 2022/1/14 | 13:50:16 |
| 4                             | 40u"MIN  | 45.6u"        | OK     | 2022/1/14 | 13:50:18 |
| 2、表层电镀测试 (Sn)                 |          |               |        |           |          |
| 数据                            | 测试标准     | 实测值           | 判定     | 测试日期      | 测试时间     |
| 1                             | 40u"MIN  | 43.3u"        | OK     | 2022/1/14 | 14:10:36 |
| 2                             | 40u"MIN  | 42.4u"        | OK     | 2022/1/14 | 14:10:38 |
| 3                             | 40u"MIN  | 46.7u"        | OK     | 2022/1/14 | 14:10:40 |
| 4                             | 40u"MIN  | 43.1u"        | OK     | 2022/1/14 | 14:10:42 |
| 3、表层电镀测试 (Au)                 |          |               |        |           |          |
| 数据                            | 测试标准     | 实测值           | 判定     | 测试日期      | 测试时间     |
| 1                             | 0.5u"MIN | 0.56u"        | OK     | 2022/1/14 | 14:18:20 |
| 2                             | 0.5u"MIN | 0.58u"        | OK     | 2022/1/14 | 14:18:22 |
| 3                             | 0.5u"MIN | 0.59u"        | OK     | 2022/1/14 | 14:18:24 |
| 4                             | 0.5u"MIN | 0.57u"        | OK     | 2022/1/14 | 14:18:26 |

核准: 欠必锋

审核: 刘联英

检验员: 但芬

## 盐水喷雾实验报告

|        |                                  |        |                      |
|--------|----------------------------------|--------|----------------------|
| 试验方法   | 盐水喷雾腐蚀试验法                        | 参考资料   | MIL-STD-1216         |
| METHOD | NEUTRL SALT SPRAY CORROSION TEST | REF    |                      |
| 客户     | /                                | 试验起始日期 | 2022年08月02日 08:00 时起 |
|        |                                  | DATE   | 2022年08月03日 20:00 时止 |
| 样品名称   | 双层SIM CARD 高度3.0卡座               | 试验数量   | 5PCS                 |
| P/N    | SD5209-170B-G618                 |        |                      |

### 试验条件 (TEST CONDITION)

- 1、盐水溶解 (SALT SOLUTION: 浓度 $50 \pm 10\text{g/L}$ , PH值6.5-7.2).
- 2、试验室温度 (TEMP. IT THE SPRAY DHAMBR):  $35 \pm 1^\circ\text{C}$ .
- 3、盐水桶温度 (TEMP. OF SALE SOL' N TANK):  $35 \pm 1^\circ\text{C}$ .
- 4、压力桶温度 (TEMP. OF SAR SUPPLIERY):  $47 \pm 1^\circ\text{C}$ .
- 5、试验室相对湿度 (R. H IN THE CHAMBER ) 85%.
- 6、压缩空气压力 (COMPRESSED AIR PRESSURE):  $1.00 \pm 0.01\text{Kg/cm}^2$ .
- 7、样品放置位置 (SPECIMEN SUPPORTED ANGLE ): 尼龙绳吊挂 $70^\circ - 90^\circ$ .
- 8、喷雾收集量 (COLLECT RATE OF SALT SOL' N)  $1-2\text{mL}/(8 \text{ cm}^2\text{hr})$ .
- 9、盐雾测试时间: 12小时 (H)

### 判定方法 (ADFUSGD METHOD)

试验后以20倍放大镜观察、无蓝、绿色腐蚀物之现象 (不包含折弯处), 即判定合格. (Inspext the ecimen at 20 xmagnification no blue or green corrosion products are acceptable)

| 样品序号 | 试验后现象                 | 判定      |
|------|-----------------------|---------|
|      | PHENOMENON AFTER TEST | COMMENT |
| 1    | 无蓝、绿色腐蚀物之现象           | OK      |
| 2    | 无蓝、绿色腐蚀物之现象           | OK      |
| 3    | 无蓝、绿色腐蚀物之现象           | OK      |
| 4    | 无蓝、绿色腐蚀物之现象           | OK      |
| 5    | 无蓝、绿色腐蚀物之现象           | OK      |
|      |                       |         |
|      |                       |         |
|      |                       |         |

核准: 欠必锋

审核: 刘联英

试验员: 但芬

## Materials Information

**PRODUCT NAME: LCP M-401 BK**

**COMPOSITION/INFORMATION OF LCP M-401 BK**

**SUBSTANCE/MIXTURE: Mixture**

**SYNONYM(S): Aromatic Liquid Crystal Polymer(LCP)**

| 品名         | 比例    | 用途         |
|------------|-------|------------|
| 德众泰 LCP 树脂 | 0.565 | 构成材料主要成分   |
| 抗氧化剂       | 0.002 | 抗氧化        |
| 科莱恩热稳定剂    | 0.003 | 增加高温稳定性    |
| 黑色母        | 0.01  | 着色         |
| 滑石粉        | 0.2   | 增强剂, 增加流动性 |
| 玻纤         | 0.22  | 增强         |

NAME OF COMPANY: DZT Engineering Plastics Tech. Co.,Ltd

ADDRESS: Building 2 Zhichong Industrial Park, Hi-Tech Zone, Jiangmen City,  
Guangdong Province, China

SECTION IN CHARGE: Quality Assurance Department

TEL/FAX: +86-750-3689920/+86-750-3689921

EMERGENCY TEL: +86-750-3689708



# 产品质量证明书

## PRODUCT INSPECTION CERTIFICATE

|                       |             |                      |                 |                         |                |               |                 |                        |          |
|-----------------------|-------------|----------------------|-----------------|-------------------------|----------------|---------------|-----------------|------------------------|----------|
| 合同号码:<br>Contract No. | 20131014003 | 等级:<br>Grade         | 1A              | 品名:<br>Commodity        | 不锈钢冷轧钢带 (COIL) | 牌号:<br>Type   | SUS304-CSP 1/2H | 钢卷编号:<br>Serial number | 13092820 |
| 订货方:<br>Order         | YU HUA      | 标准:<br>Specification | JIS G 4313-1996 | 表面加工:<br>Surface Finish | 2B 亮           | 发行日期:<br>Date | 2013-10-15      |                        |          |
| 供货方:<br>Supplier      | 东莞鑫发        |                      |                 |                         |                |               |                 |                        |          |

| 序号<br>No. | 产品牌号<br>Product name | 产品尺寸<br>Product Size  |                   |                   |                   |                    | 拉伸试验<br>Tensile Test              |                                   |                | 表面硬度<br>Hardness<br>HV | 化学成分<br>Chemical Composition(%) |                   |                   |                  |                  |                     |                      |
|-----------|----------------------|-----------------------|-------------------|-------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|----------------|------------------------|---------------------------------|-------------------|-------------------|------------------|------------------|---------------------|----------------------|
|           |                      | 厚度<br>Thickness<br>mm | 宽度<br>Width<br>mm | 长度<br>Length<br>m | 卷数<br>Number<br>C | 重量<br>Weight<br>Kg | 降伏强度<br>N/mm <sup>2</sup><br>≥470 | 抗拉强度<br>N/mm <sup>2</sup><br>≥780 | 延伸率<br>%<br>≥6 |                        | 碳<br>C<br>≤0.080                | 硅<br>Si<br>≤1.000 | 锰<br>Mn<br>≤2.000 | 磷<br>P<br>≤0.045 | 硫<br>S<br>≤0.030 | 镍<br>Ni<br>8.0-10.5 | 铬<br>Cr<br>18.0-20.0 |
| 1         | SUS304-CSP 1/2H      | 0.3                   | 410               | COIL              | 1                 | 1102.3             | 625                               | 836                               | 7              | 280                    | 0.072                           | 0.490             | 1.212             | 0.042            | 0.002            | 8.100               | 18.020               |

备注:(Remarks):

1. 尺寸和表面:合格

Size and Surface:Guaranteed

2. 拉伸试验:方法符合JISZ2241标准;试样规格为JISZ2201 5号

Tensile Test:Technique accord with JIS Z 2241;

Sample Specification accord with No.5 of JIS Z 2201

3. 硬度试验:方法符合JIS Z 2244标准

Hardness Test:Technique accord with JIS Z 2244

兹证明所列产品均符合订单和标准的制造要求

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN  
MADE IN ACCORDANCE WITH THE ORDER AND  
SPECIFICATION

\*此报告仅可完全复制

\*The report can only be copied completely





# 鉅鼎銅材廠檢驗報告單

|                              |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
|------------------------------|--------------------------|----------------------|--------------------------------|------------------------|-----------------------------------|-----------------------------|--------------------------------------|-----------------------|------|----|
| 公司名稱<br>Customer             | 鉅鼎銅材廠檢驗報告單               |                      |                                |                        | 重量<br>Weight(kg)                  | 1078                        | 出貨日期<br>Date                         | 2021/11/23            |      |    |
| 品名<br>Article                | 標準<br>Standard No        |                      |                                |                        | 尺寸<br>Dimension                   |                             | 狀態<br>Tenper                         | 銅卷編號<br>Coil No       |      |    |
| C2680                        | JISH3100:2017            |                      |                                |                        | 0.18*400                          |                             | EH                                   | 1021-C-08             |      |    |
| 化學成分Chemical Compositions(%) |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
| 元素<br>Element                | Cu %                     | Zn%                  | Pb%                            | Fe%                    | \                                 | \                           | \                                    | \                     | 化學成分 | 雜質 |
| 規範<br>Spec                   | 64.0-68.0                | 餘量                   | <0.05                          | <0.05                  | \                                 | \                           | \                                    | \                     | 合格   | 合格 |
| 實測<br>Actual                 | 64.32                    | 餘量                   | 0.0036                         | 0.0136                 | \                                 | \                           | \                                    | \                     | 合格   | 合格 |
| 機械性質Mechanical Properties    |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
| 項目<br>Item                   | 結晶粒度<br>Grain Size<br>Mm | 硬度<br>Hardness<br>Hv | 抗拉強度<br>TensionStrength<br>Mpa | 伸長度<br>Elongation<br>% | 導電率<br>Electrical Conduc<br>%IACS | 彎曲試驗<br>Bending Test<br>180 | 表面粗度<br>Surface Roughness<br>Ra(u m) | 彎曲度<br>Camber<br>mm/n |      |    |
| 規範MAX<br>Spec                | \                        | 170-190              | 490-610                        | \                      | \                                 | \                           | \                                    | \                     |      |    |
| 實測<br>Actual                 | \                        | 178                  | 574                            | 5                      | \                                 | \                           | \                                    | \                     |      |    |

品質部


 聯繫電話:0755-28111847  
 傳真: 0755-28110077  
 送貨專用章

# Test Report

No. CANEC2222380701

Date: 26 Oct 2022

Page 1 of 4

Client Name : SHENZHEN HUALIANWEI ELECTRONICS TECHNOLOGY CO.,LTD

Client Address : 101, 201, PLANT 1, NO.307, GUANLAN GUIHUA ROAD, GUIXIANG COMMUNITY, GUANLAN SUB-DISTRICT, LONGHUA DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Sample Name : C2680 Terminal

Model No. : C2680 terminal after plating

Client Ref. Info. : Used for USB series, HDMI series, RJ series, 1394 series, MICRO series, MINI series, DISPLAYPORT series, VGA series, DVI series, TYPE-C series, JACK series

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

SGS Job No. : CP22-057100 - GZ

Date of Sample Received : 20 Oct 2022

Testing Period : 20 Oct 2022 - 26 Oct 2022

Test Requested : Selected 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).

Result Summary :

| Test Requested                                                                                                            | Conclusion |
|---------------------------------------------------------------------------------------------------------------------------|------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium and Hexavalent chromium | PASS       |

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

*Dongyu Xie*

Dongyu Xie  
Approved Signatory

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A17521CE



## Test Report

No. CANEC2222380701

Date: 26 Oct 2022

Page 2 of 4

Test Result(s) :

### Test Part Description :

| Specimen No. | SGS Sample ID    | Description              |
|--------------|------------------|--------------------------|
| SN1          | CAN22-223807.001 | Silver-grey/brassy metal |

Remarks :

- (1) 1 mg/kg = 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 and Hexavalent chromium

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

| Test Item(s)                  | Limit | Unit               | MDL  | 001 |
|-------------------------------|-------|--------------------|------|-----|
| Cadmium (Cd)                  | 100   | mg/kg              | 2    | ND  |
| Lead (Pb)                     | 1000  | mg/kg              | 2    | 3   |
| Mercury (Hg)                  | 1000  | mg/kg              | 2    | ND  |
| Hexavalent Chromium (Cr(VI))▼ | -     | µg/cm <sup>2</sup> | 0.10 | 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 CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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.



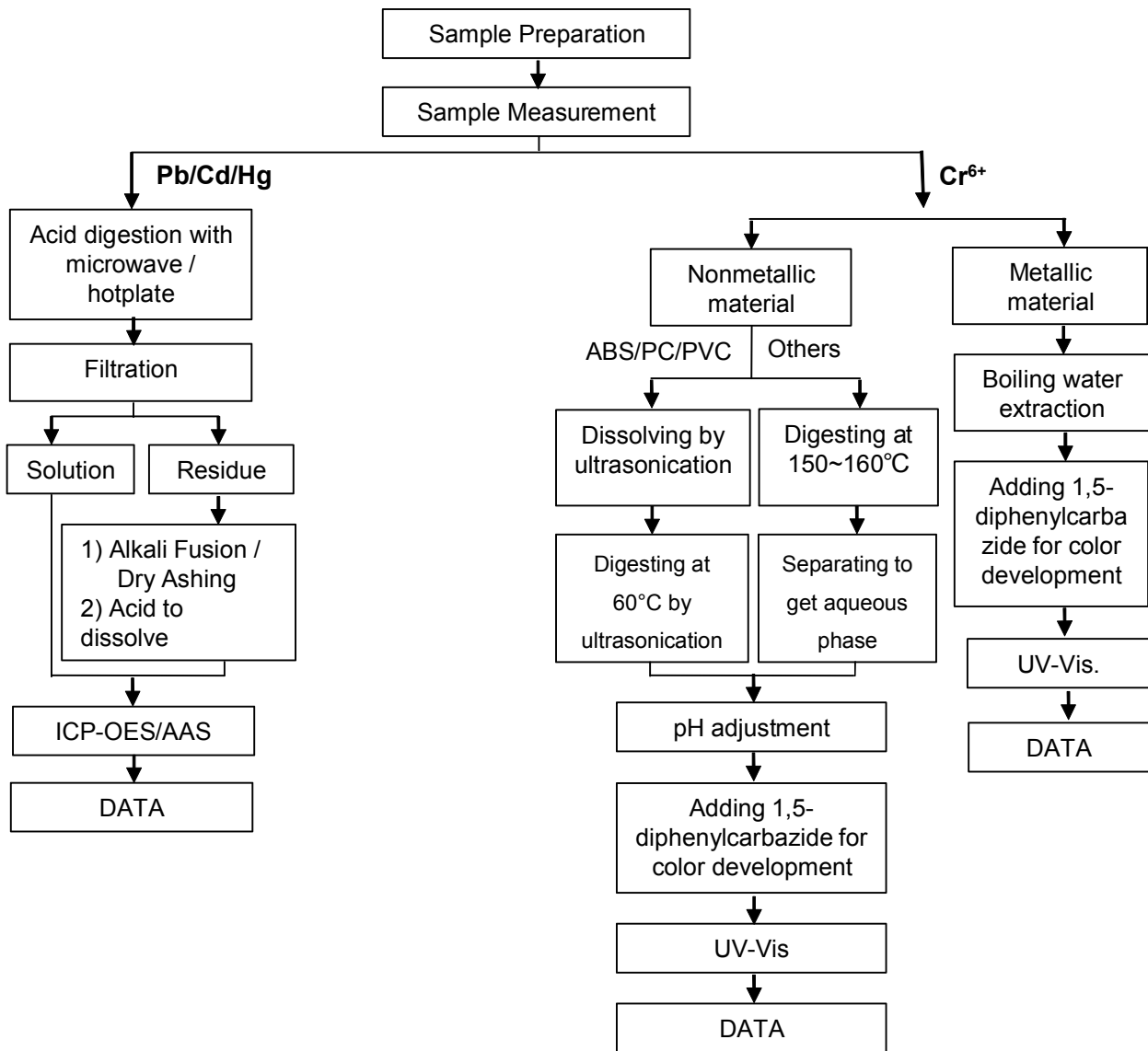
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ATTACHMENTS

Pb/Cd/Hg/Cr<sup>6+</sup> Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded).



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# Test Report

No. CANEC2222380705

Date: 26 Oct 2022

Page 1 of 4

Client Name : SHENZHEN HUALIANWEI ELECTRONICS TECHNOLOGY CO.,LTD

Client Address : 101, 201, PLANT 1, NO.307, GUANLAN GUIHUA ROAD, GUIXIANG COMMUNITY, GUANLAN SUB-DISTRICT, LONGHUA DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Sample Name : SUS304 hardware

Model No. : SUS304

Client Ref. Info. : Used for USB series, HDMI series, RJ series, 1394 series, MICRO series, MINI series, DISPLAYPORT series, VGA series, DVI series, TYPE-C series, JACK series

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

SGS Job No. : CP22-057100 - GZ

Date of Sample Received : 20 Oct 2022

Testing Period : 20 Oct 2022 - 26 Oct 2022

Test Requested : Selected 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).

Result Summary :

| Test Requested                                                                                                            | Conclusion |
|---------------------------------------------------------------------------------------------------------------------------|------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium and Hexavalent chromium | PASS       |

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

*Dongyu Xie*

Dongyu Xie  
Approved Signatory

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

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## Test Report

No. CANEC2222380705

Date: 26 Oct 2022

Page 2 of 4

Test Result(s) :

### Test Part Description :

| Specimen No. | SGS Sample ID    | Description       |
|--------------|------------------|-------------------|
| SN1          | CAN22-223807.005 | Silver-grey metal |

Remarks :

- (1) 1 mg/kg = 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 and Hexavalent chromium

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

| Test Item(s)                  | Limit | Unit               | MDL  | 005 |
|-------------------------------|-------|--------------------|------|-----|
| Cadmium (Cd)                  | 100   | mg/kg              | 2    | ND  |
| Lead (Pb)                     | 1000  | mg/kg              | 2    | ND  |
| Mercury (Hg)                  | 1000  | mg/kg              | 2    | ND  |
| Hexavalent Chromium (Cr(VI))▼ | -     | µg/cm <sup>2</sup> | 0.10 | 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 CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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.

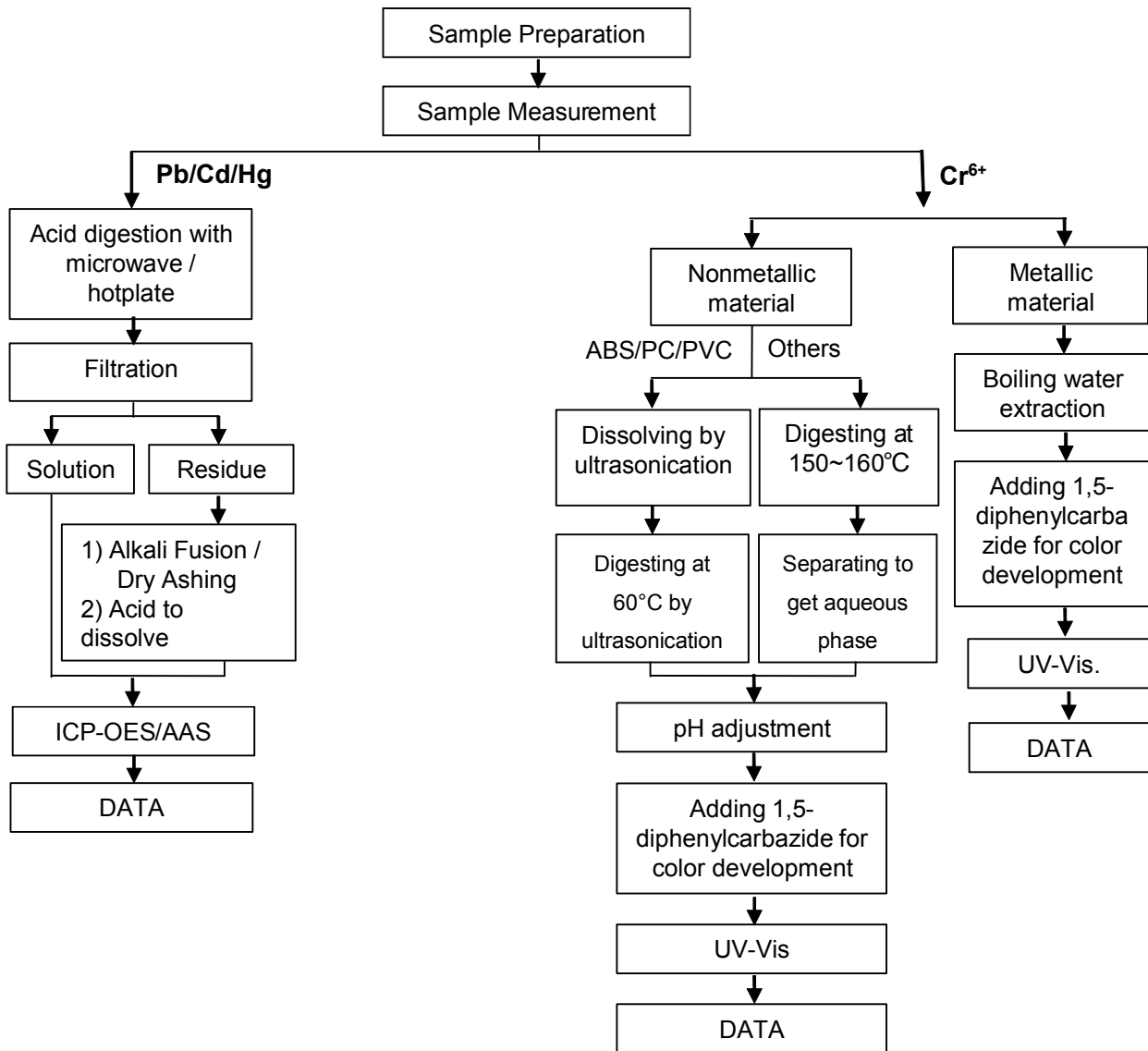
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (  $w=0$  ) stated in ILAC-G8:09/2019.



ATTACHMENTS

Pb/Cd/Hg/Cr<sup>6+</sup> Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded).





Sample photo:



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## Test Report

No. CANEC2222380708

Date: 26 Oct 2022

Page 1 of 6

Client Name : SHENZHEN HUALIANWEI ELECTRONICS TECHNOLOGY CO.,LTD

Client Address : 101, 201, PLANT 1, NO.307, GUANLAN GUIHUA ROAD, GUIXIANG COMMUNITY, GUANLAN SUB-DISTRICT, LONGHUA DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Sample Name : LCP plastic black color

Model No. : LCP Plastic

Client Ref. Info. : Used for USB series, HDMI series, RJ series, 1394 series, MICRO series, MINI series, DISPLAYPORT series, VGA series, DVI series, TYPE-C series, JACK series

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

SGS Job No. : CP22-057100 - GZ

Date of Sample Received : 20 Oct 2022

Testing Period : 20 Oct 2022 - 26 Oct 2022

Test Requested : Selected 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).

### Result Summary :

| Test Requested                                                                                                                                                                                                                                                                                                             | 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

*Dongyu Xie*

Dongyu Xie  
Approved Signatory

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## Test Report

No. CANEC2222380708

Date: 26 Oct 2022

Page 2 of 6

Test Result(s) :

### Test Part Description :

| Specimen No. | SGS Sample ID    | Description   |
|--------------|------------------|---------------|
| SN1          | CAN22-223807.008 | Black plastic |

Remarks :

- (1) 1 mg/kg = 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| Test Item(s)               | Limit | Unit  | MDL | 008 |
|----------------------------|-------|-------|-----|-----|
| Cadmium (Cd)               | 100   | mg/kg | 2   | ND  |
| Lead (Pb)                  | 1000  | mg/kg | 2   | 6   |
| Mercury (Hg)               | 1000  | mg/kg | 2   | ND  |
| Hexavalent Chromium (CrVI) | 1000  | mg/kg | 8   | ND  |
| Sum of PBBs                | 1000  | mg/kg | -   | ND  |
| Monobromobiphenyl          | -     | mg/kg | 5   | ND  |
| Dibromobiphenyl            | -     | mg/kg | 5   | ND  |
| Tribromobiphenyl           | -     | mg/kg | 5   | ND  |
| Tetrabromobiphenyl         | -     | mg/kg | 5   | ND  |
| Pentabromobiphenyl         | -     | mg/kg | 5   | ND  |
| Hexabromobiphenyl          | -     | mg/kg | 5   | ND  |
| Heptabromobiphenyl         | -     | mg/kg | 5   | ND  |
| Octabromobiphenyl          | -     | mg/kg | 5   | ND  |
| Nonabromobiphenyl          | -     | mg/kg | 5   | ND  |
| Decabromobiphenyl          | -     | mg/kg | 5   | ND  |
| Sum of PBDEs               | 1000  | mg/kg | -   | ND  |
| Monobromodiphenyl ether    | -     | mg/kg | 5   | ND  |
| Dibromodiphenyl ether      | -     | mg/kg | 5   | ND  |
| Tribromodiphenyl ether     | -     | mg/kg | 5   | ND  |
| Tetrabromodiphenyl ether   | -     | mg/kg | 5   | ND  |



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# Test Report

No. CANEC2222380708

Date: 26 Oct 2022

Page 3 of 6

| <u>Test Item(s)</u>                 | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>008</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Hexabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Heptabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Octabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Nonabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Decabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Dibutyl phthalate (DBP)             | 1000         | mg/kg       | 50         | ND         |
| Butyl benzyl phthalate (BBP)        | 1000         | mg/kg       | 50         | ND         |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (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) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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.



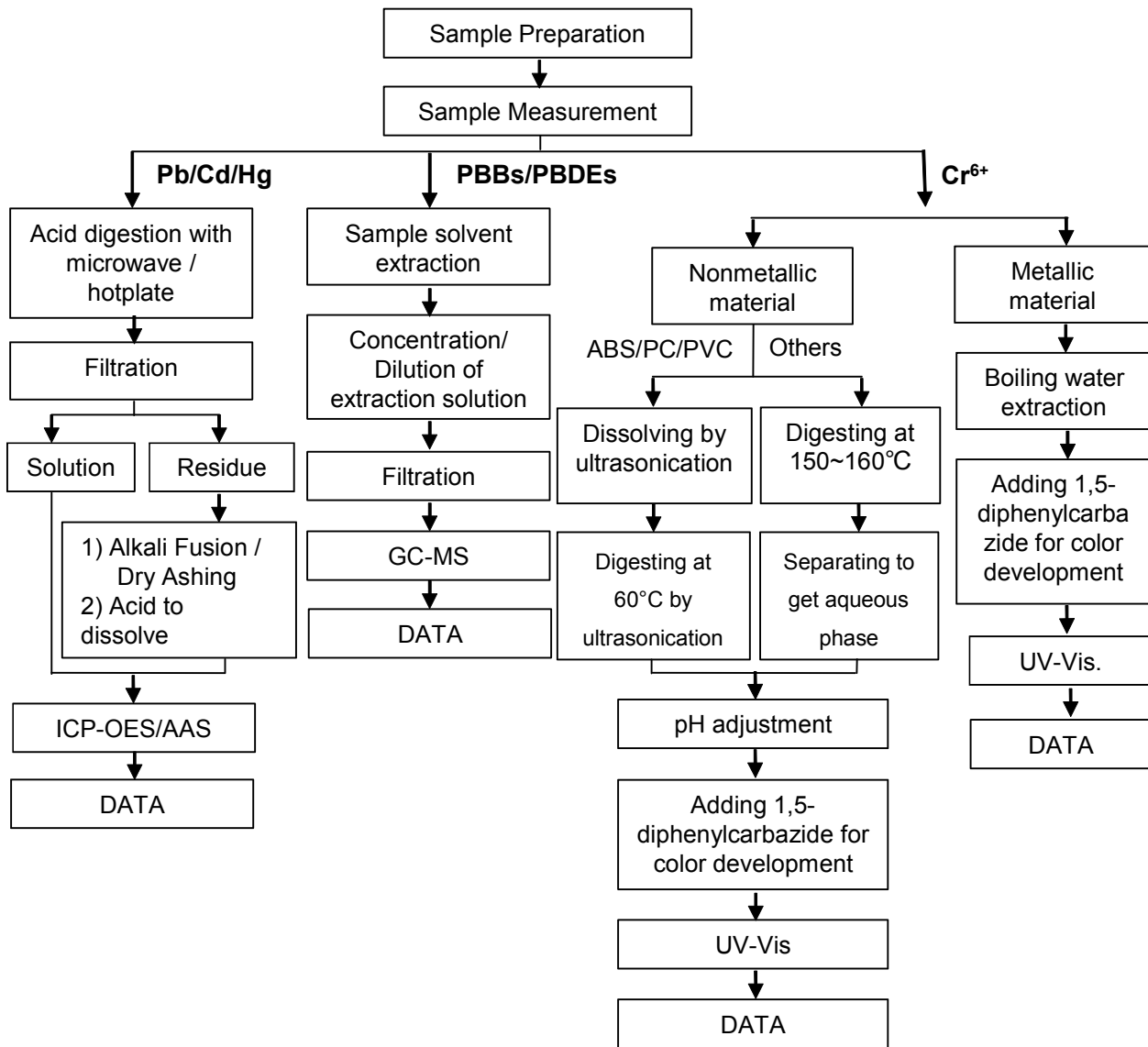
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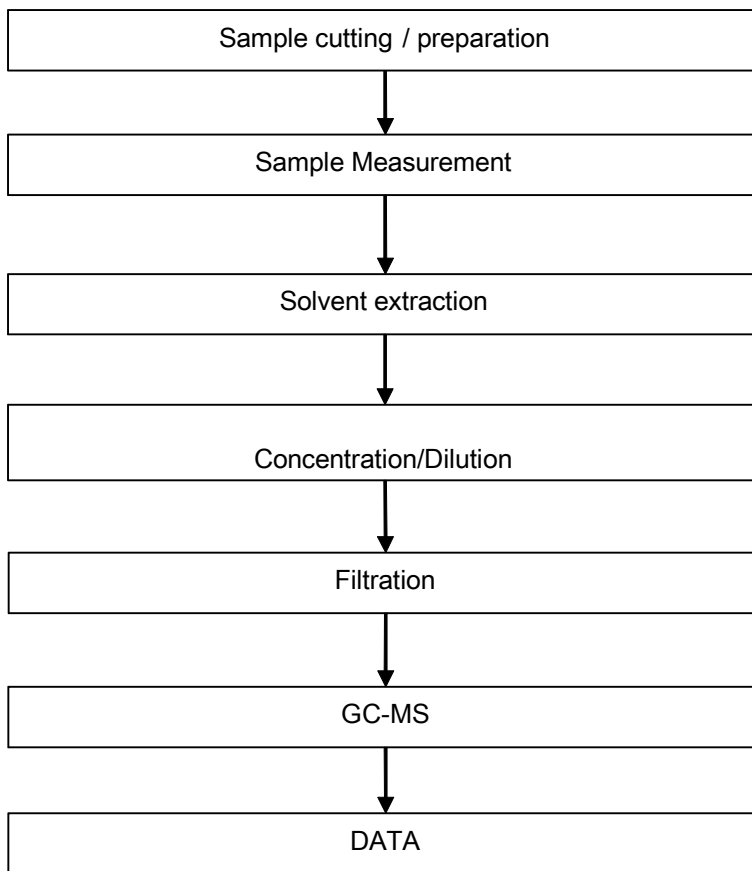
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart



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## Test Report

No. CANEC2218227001

Date: 30 Aug 2022

Page 1 of 8

Client Name : SHENZHEN CITY TONGHUA INDUSTRY CO.,LTD

Client Address : TONGHUA MANSIN TONGLE XINBU VILLANG TOWN SHENZHEN CITY CHINA

Sample Name : Nickel(Ni)

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

SGS Job No. : CP22-047169 - SZ  
 Date of Sample Received : 25 Aug 2022  
 Testing Period : 25 Aug 2022 - 30 Aug 2022  
 Test Requested : Selected 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).

Result Summary :

| Test Requested                                                                                                                                                                                                                                                                                                             | 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        |
| Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives                                                                                                                                                                                                                        | See Results |

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

*Dongyu Xie*

Dongyu Xie  
 Approved Signatory

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## Test Report

No. CANEC2218227001

Date: 30 Aug 2022

Page 2 of 8

Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID    | Description              |
|--------------|------------------|--------------------------|
| SN1          | CAN22-182270.001 | Silver-gray plated metal |

Remarks :

- (1) 1 mg/kg = 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u>           | <u>Limit</u> | <u>Unit</u>        | <u>MDL</u> | <u>001</u> |
|-------------------------------|--------------|--------------------|------------|------------|
| Cadmium (Cd)                  | 100          | mg/kg              | 2          | ND         |
| Lead (Pb)                     | 1000         | mg/kg              | 2          | 49         |
| Mercury (Hg)                  | 1000         | mg/kg              | 2          | ND         |
| Hexavalent Chromium (Cr(VI))▼ | -            | µg/cm <sup>2</sup> | 0.10       | ND         |
| Sum of PBBs                   | 1000         | mg/kg              | -          | ND         |
| Monobromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Dibromobiphenyl               | -            | mg/kg              | 5          | ND         |
| Tribromobiphenyl              | -            | mg/kg              | 5          | ND         |
| Tetrabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Pentabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Hexabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Heptabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Octabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Nonabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Decabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Sum of PBDEs                  | 1000         | mg/kg              | -          | ND         |
| Monobromodiphenyl ether       | -            | mg/kg              | 5          | ND         |
| Dibromodiphenyl ether         | -            | mg/kg              | 5          | ND         |
| Tribromodiphenyl ether        | -            | mg/kg              | 5          | ND         |
| Tetrabromodiphenyl ether      | -            | mg/kg              | 5          | ND         |



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## Test Report

No. CANEC2218227001

Date: 30 Aug 2022

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| <u>Test Item(s)</u>                 | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Hexabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Heptabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Octabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Nonabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Decabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Dibutyl phthalate (DBP)             | 1000         | mg/kg       | 50         | ND         |
| Butyl benzyl phthalate (BBP)        | 1000         | mg/kg       | 50         | ND         |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (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 CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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.

### Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

| <u>Test Item(s)</u>                                       | <u>CAS NO.</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-----------------------------------------------------------|----------------|-------------|------------|------------|
| Perfluorooctanoic acid (PFOA) and its salts+              | 335-67-1       | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) ^                       | 1763-23-1      | mg/kg       | 0.010      | ND         |
| Perfluorooctane Sulfonamide (PFOSA)                       | 754-91-6       | mg/kg       | 0.010      | ND         |
| N-methylperfluoro-1-octanesulfonamide(MeFOSA)             | 31506-32-8     | mg/kg       | 0.010      | ND         |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA)             | 4151-50-2      | mg/kg       | 0.010      | ND         |
| 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE) | 24448-09-7     | mg/kg       | 0.010      | ND         |
| 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE)  | 1691-99-2      | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) and its derivatives     | -              | mg/kg       | -          | ND         |

### Notes :



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- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH<sub>4</sub> (CAS No.: 29081-56-9), PFOS-NH(OH)<sub>2</sub> (CAS No.: 70225-14-8), PFOS-N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7)

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.



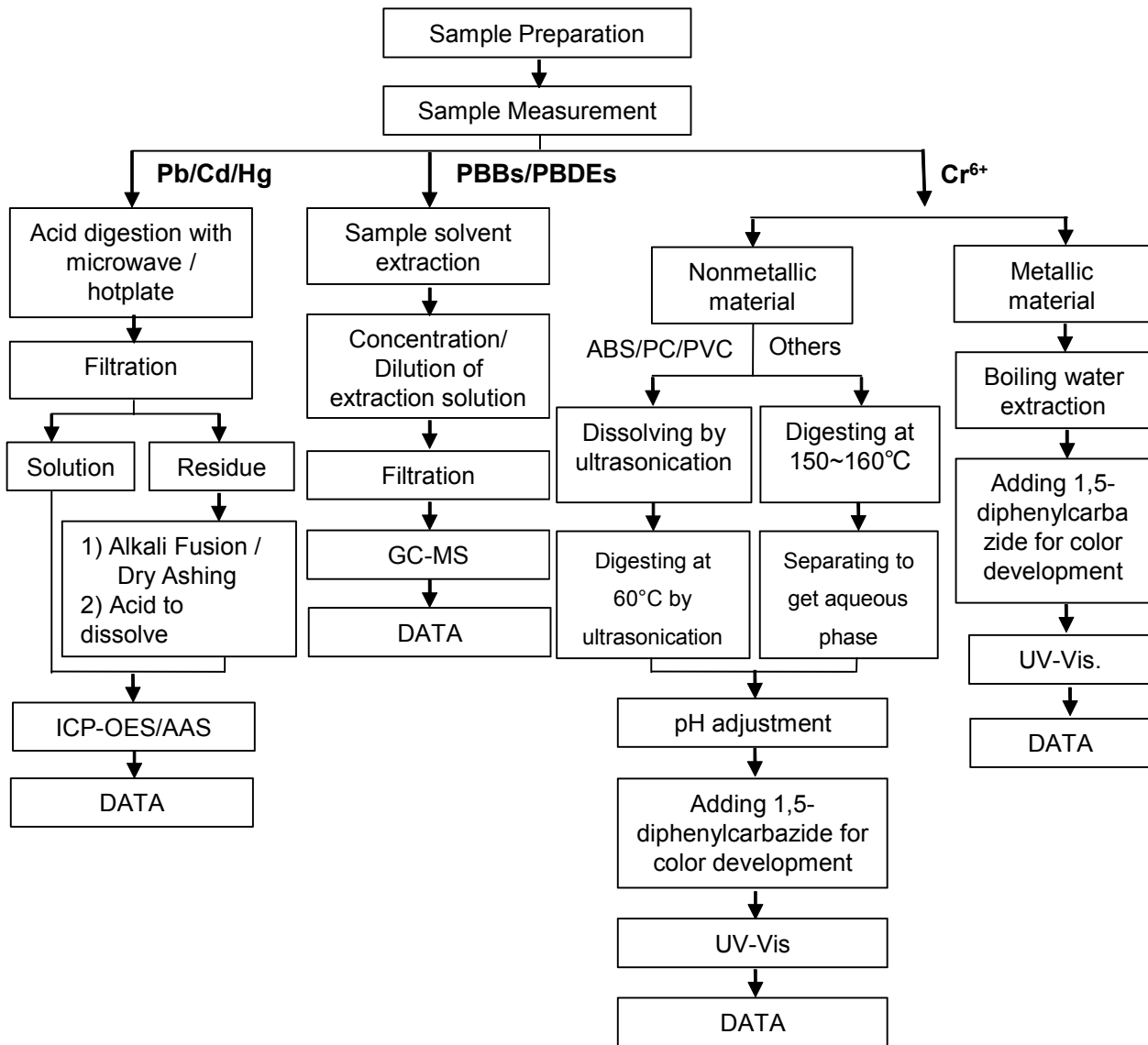
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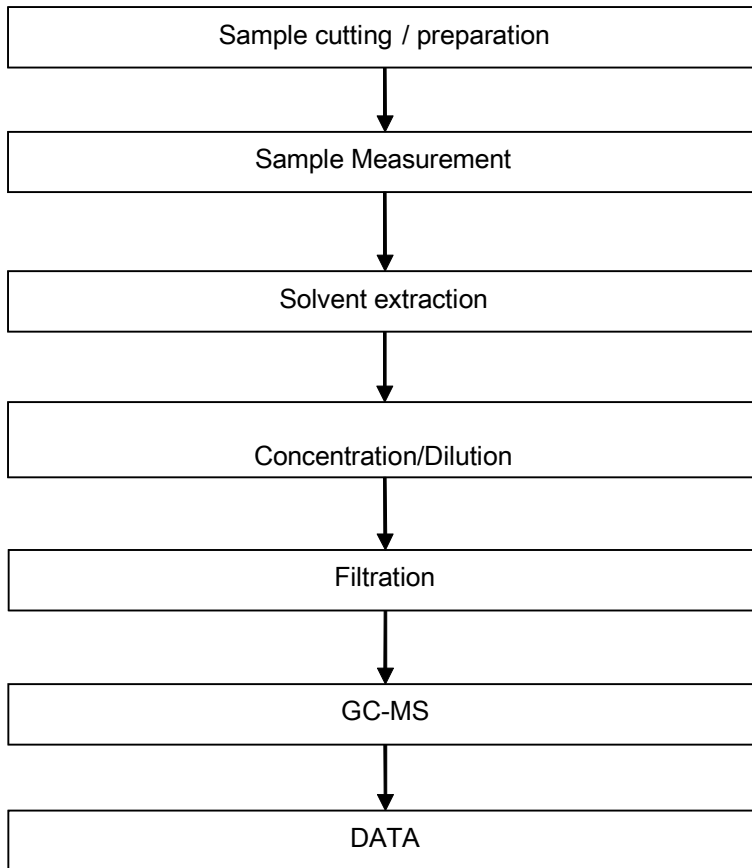
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart

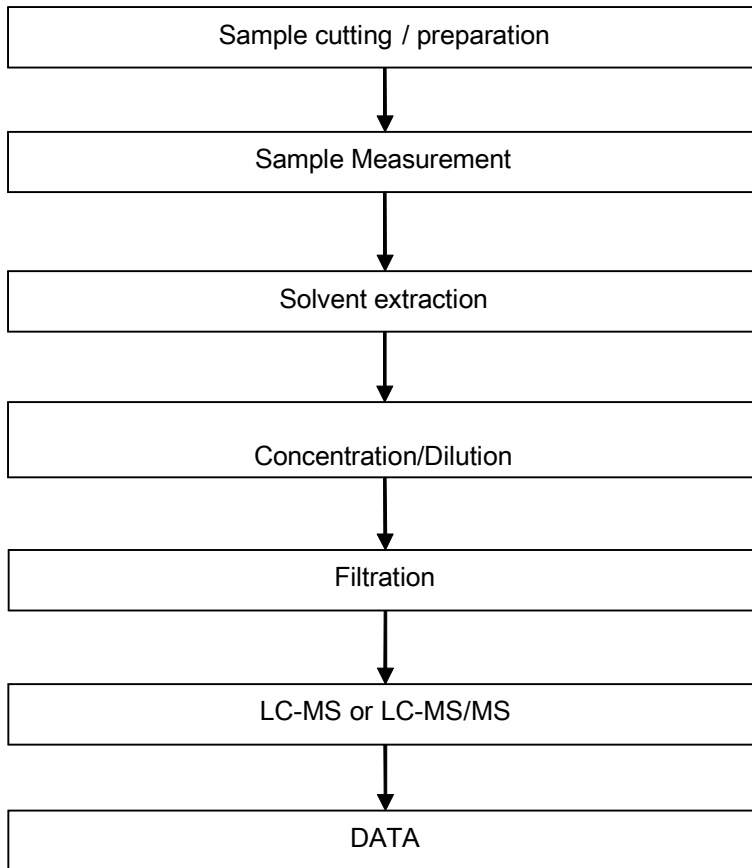


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PFOA / PFOS Testing Flow Chart



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Sample photo:



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\*\*\* End of Report \*\*\*



# Test Report

No. CANEC2218227003

Date: 30 Aug 2022

Page 1 of 8

Client Name : SHENZHEN CITY TONGHUA INDUSTRY CO.,LTD

Client Address : TONGHUA MANSIN TONGLE XINBU VILLANG TOWN SHENZHEN CITY CHINA

Sample Name : Bright Tin(SN)

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

SGS Job No. : CP22-047169 - SZ  
 Date of Sample Received : 25 Aug 2022  
 Testing Period : 25 Aug 2022 - 30 Aug 2022  
 Test Requested : Selected 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).

Result Summary :

| Test Requested                                                                                                                                                                                                                                                                                                             | 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        |
| Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives                                                                                                                                                                                                                        | See Results |

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

*Dongyu Xie*

Dongyu Xie  
 Approved Signatory

scan to see the report



87F8007D





## Test Report

No. CANEC2218227003

Date: 30 Aug 2022

Page 2 of 8

Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID    | Description              |
|--------------|------------------|--------------------------|
| SN1          | CAN22-182270.003 | Silver-gray plated metal |

Remarks :

- (1) 1 mg/kg = 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u>           | <u>Limit</u> | <u>Unit</u>        | <u>MDL</u> | <u>003</u> |
|-------------------------------|--------------|--------------------|------------|------------|
| Cadmium (Cd)                  | 100          | mg/kg              | 2          | ND         |
| Lead (Pb)                     | 1000         | mg/kg              | 2          | 44         |
| Mercury (Hg)                  | 1000         | mg/kg              | 2          | ND         |
| Hexavalent Chromium (Cr(VI))▼ | -            | µg/cm <sup>2</sup> | 0.10       | ND         |
| Sum of PBBs                   | 1000         | mg/kg              | -          | ND         |
| Monobromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Dibromobiphenyl               | -            | mg/kg              | 5          | ND         |
| Tribromobiphenyl              | -            | mg/kg              | 5          | ND         |
| Tetrabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Pentabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Hexabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Heptabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Octabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Nonabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Decabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Sum of PBDEs                  | 1000         | mg/kg              | -          | ND         |
| Monobromodiphenyl ether       | -            | mg/kg              | 5          | ND         |
| Dibromodiphenyl ether         | -            | mg/kg              | 5          | ND         |
| Tribromodiphenyl ether        | -            | mg/kg              | 5          | ND         |
| Tetrabromodiphenyl ether      | -            | mg/kg              | 5          | ND         |



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## Test Report

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Date: 30 Aug 2022

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| <u>Test Item(s)</u>                 | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Hexabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Heptabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Octabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Nonabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Decabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Dibutyl phthalate (DBP)             | 1000         | mg/kg       | 50         | ND         |
| Butyl benzyl phthalate (BBP)        | 1000         | mg/kg       | 50         | ND         |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (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 CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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.

### Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

| <u>Test Item(s)</u>                                       | <u>CAS NO.</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|-----------------------------------------------------------|----------------|-------------|------------|------------|
| Perfluorooctanoic acid (PFOA) and its salts+              | 335-67-1       | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) ^                       | 1763-23-1      | mg/kg       | 0.010      | ND         |
| Perfluorooctane Sulfonamide (PFOSA)                       | 754-91-6       | mg/kg       | 0.010      | ND         |
| N-methylperfluoro-1-octanesulfonamide(MeFOSA)             | 31506-32-8     | mg/kg       | 0.010      | ND         |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA)             | 4151-50-2      | mg/kg       | 0.010      | ND         |
| 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE) | 24448-09-7     | mg/kg       | 0.010      | ND         |
| 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE)  | 1691-99-2      | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) and its derivatives     | -              | mg/kg       | -          | ND         |

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- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH<sub>4</sub> (CAS No.: 29081-56-9), PFOS-NH(OH)<sub>2</sub> (CAS No.: 70225-14-8), PFOS-N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) and POSF (CAS No.: 307-35-7)

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.



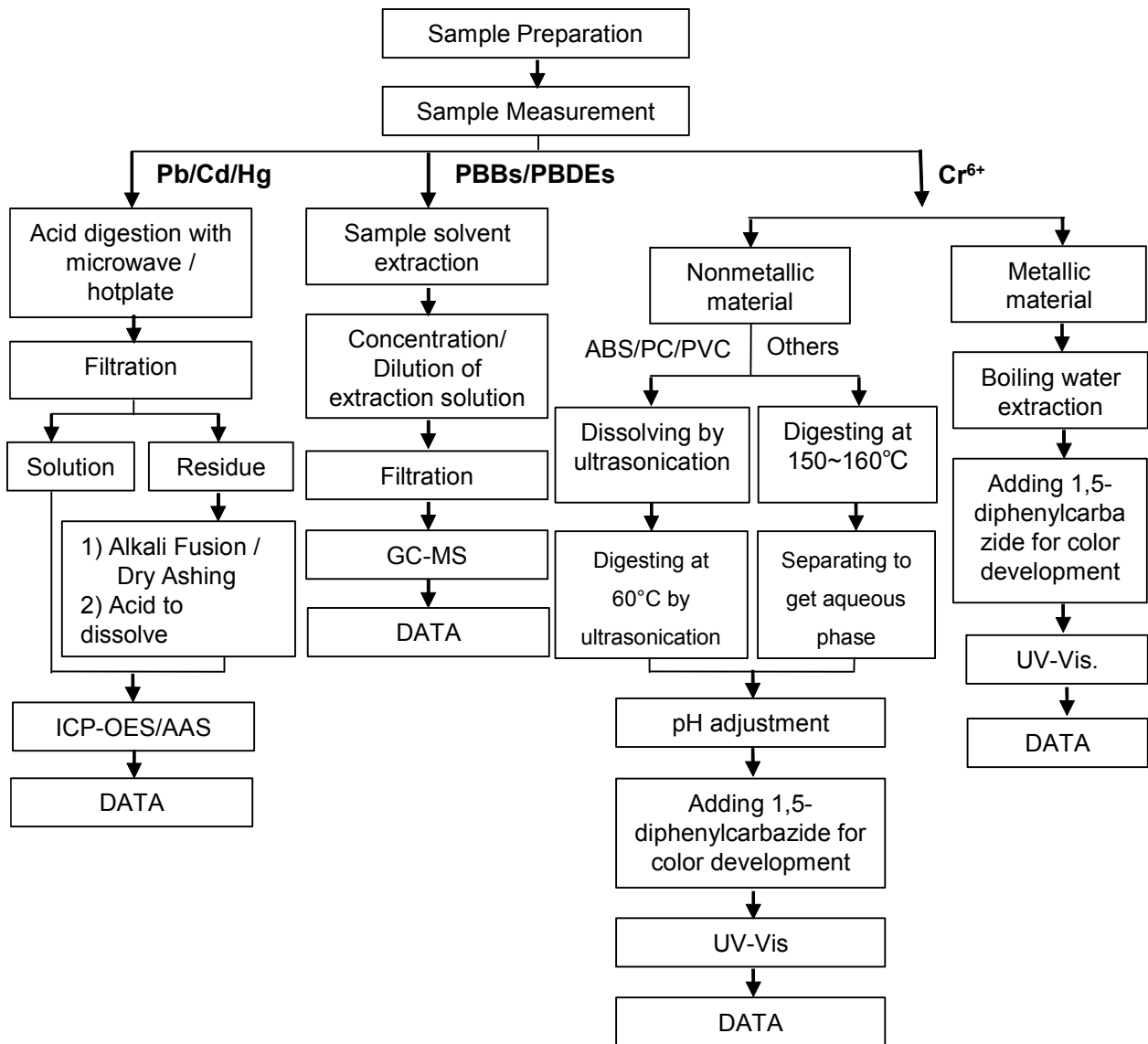
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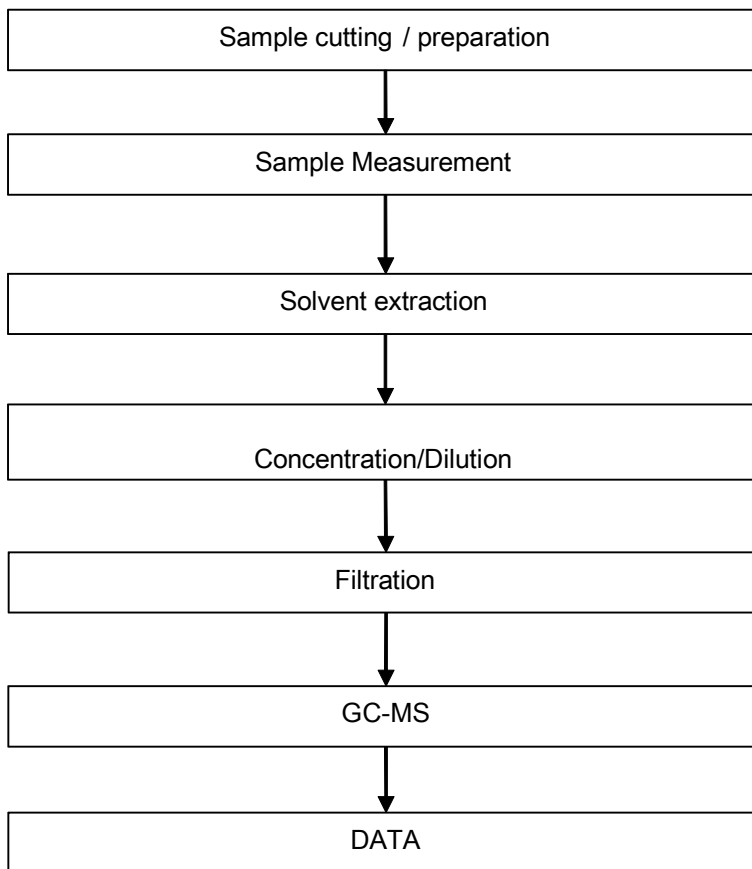
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart

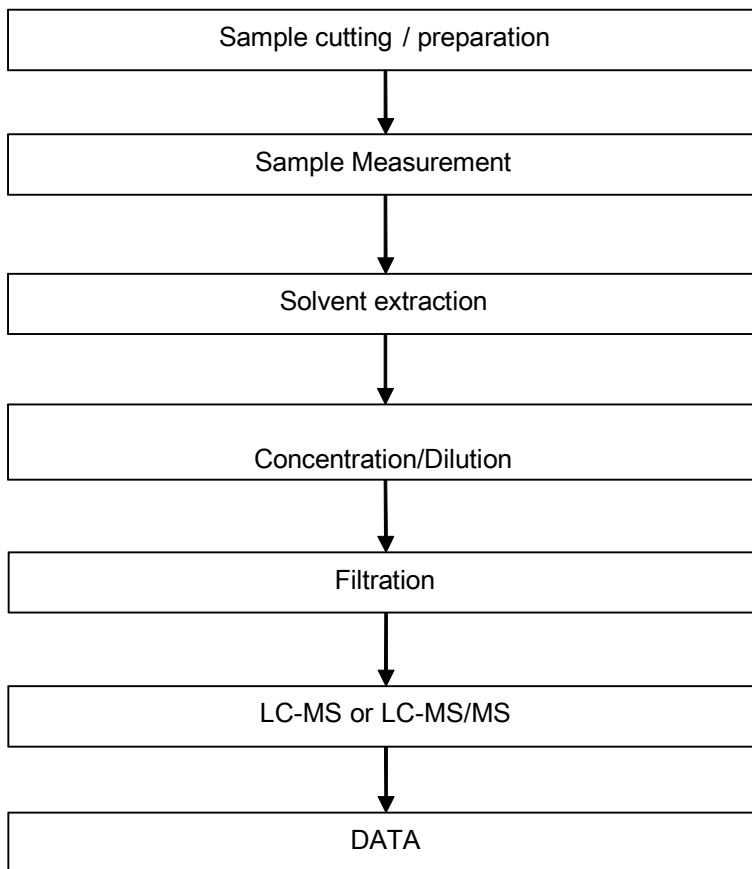


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PFOA / PFOS Testing Flow Chart



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Sample photo:



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\*\*\* End of Report \*\*\*



# Test Report

No. CANEC2218227002

Date: 30 Aug 2022

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Client Name : SHENZHEN CITY TONGHUA INDUSTRY CO.,LTD

Client Address : TONGHUA MANSIN TONGLE XINBU VILLANG TOWN SHENZHEN CITY CHINA

Sample Name : Gold (AU)

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

SGS Job No. : CP22-047169 - SZ  
 Date of Sample Received : 25 Aug 2022  
 Testing Period : 25 Aug 2022 - 30 Aug 2022  
 Test Requested : Selected 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).

Result Summary :

| Test Requested                                                                                                                                                                                                                                                                                                             | 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        |
| Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives                                                                                                                                                                                                                        | See Results |

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

*Dongyu Xie*

Dongyu Xie  
 Approved Signatory

scan to see the report



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## Test Report

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Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID    | Description       |
|--------------|------------------|-------------------|
| SN1          | CAN22-182270.002 | Gold plated metal |

Remarks :

- (1) 1 mg/kg = 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u>           | <u>Limit</u> | <u>Unit</u>        | <u>MDL</u> | <u>002</u> |
|-------------------------------|--------------|--------------------|------------|------------|
| Cadmium (Cd)                  | 100          | mg/kg              | 2          | ND         |
| Lead (Pb)                     | 1000         | mg/kg              | 2          | 50         |
| Mercury (Hg)                  | 1000         | mg/kg              | 2          | ND         |
| Hexavalent Chromium (Cr(VI))▼ | -            | µg/cm <sup>2</sup> | 0.10       | ND         |
| Sum of PBBs                   | 1000         | mg/kg              | -          | ND         |
| Monobromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Dibromobiphenyl               | -            | mg/kg              | 5          | ND         |
| Tribromobiphenyl              | -            | mg/kg              | 5          | ND         |
| Tetrabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Pentabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Hexabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Heptabromobiphenyl            | -            | mg/kg              | 5          | ND         |
| Octabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Nonabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Decabromobiphenyl             | -            | mg/kg              | 5          | ND         |
| Sum of PBDEs                  | 1000         | mg/kg              | -          | ND         |
| Monobromodiphenyl ether       | -            | mg/kg              | 5          | ND         |
| Dibromodiphenyl ether         | -            | mg/kg              | 5          | ND         |
| Tribromodiphenyl ether        | -            | mg/kg              | 5          | ND         |
| Tetrabromodiphenyl ether      | -            | mg/kg              | 5          | ND         |



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| <u>Test Item(s)</u>                 | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>002</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Hexabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Heptabromodiphenyl ether            | -            | mg/kg       | 5          | ND         |
| Octabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Nonabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Decabromodiphenyl ether             | -            | mg/kg       | 5          | ND         |
| Dibutyl phthalate (DBP)             | 1000         | mg/kg       | 50         | ND         |
| Butyl benzyl phthalate (BBP)        | 1000         | mg/kg       | 50         | ND         |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (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 CrVI if the CrVI concentration is greater than 0.13  $\mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10  $\mu\text{g}/\text{cm}^2$ ). The coating is considered a non-CrVI based coating  
 c. The result between 0.10  $\mu\text{g}/\text{cm}^2$  and 0.13  $\mu\text{g}/\text{cm}^2$  is considered to be inconclusive - unavoidable coating variations may influence the determination  
 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.

### Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

| <u>Test Item(s)</u>                                       | <u>CAS NO.</u> | <u>Unit</u> | <u>MDL</u> | <u>002</u> |
|-----------------------------------------------------------|----------------|-------------|------------|------------|
| Perfluorooctanoic acid (PFOA) and its salts+              | 335-67-1       | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) ^                       | 1763-23-1      | mg/kg       | 0.010      | ND         |
| Perfluorooctane Sulfonamide (PFOSA)                       | 754-91-6       | mg/kg       | 0.010      | ND         |
| N-methylperfluoro-1-octanesulfonamide(MeFOSA)             | 31506-32-8     | mg/kg       | 0.010      | ND         |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA)             | 4151-50-2      | mg/kg       | 0.010      | ND         |
| 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE) | 24448-09-7     | mg/kg       | 0.010      | ND         |
| 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE)  | 1691-99-2      | mg/kg       | 0.010      | ND         |
| Perfluorooctane sulfonates (PFOS) and its derivatives     | -              | mg/kg       | -          | ND         |

### Notes :



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- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH<sub>4</sub> (CAS No.: 29081-56-9), PFOS-NH(OH)<sub>2</sub> (CAS No.: 70225-14-8), PFOS-N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) and POSF (CAS No.: 307-35-7)

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.



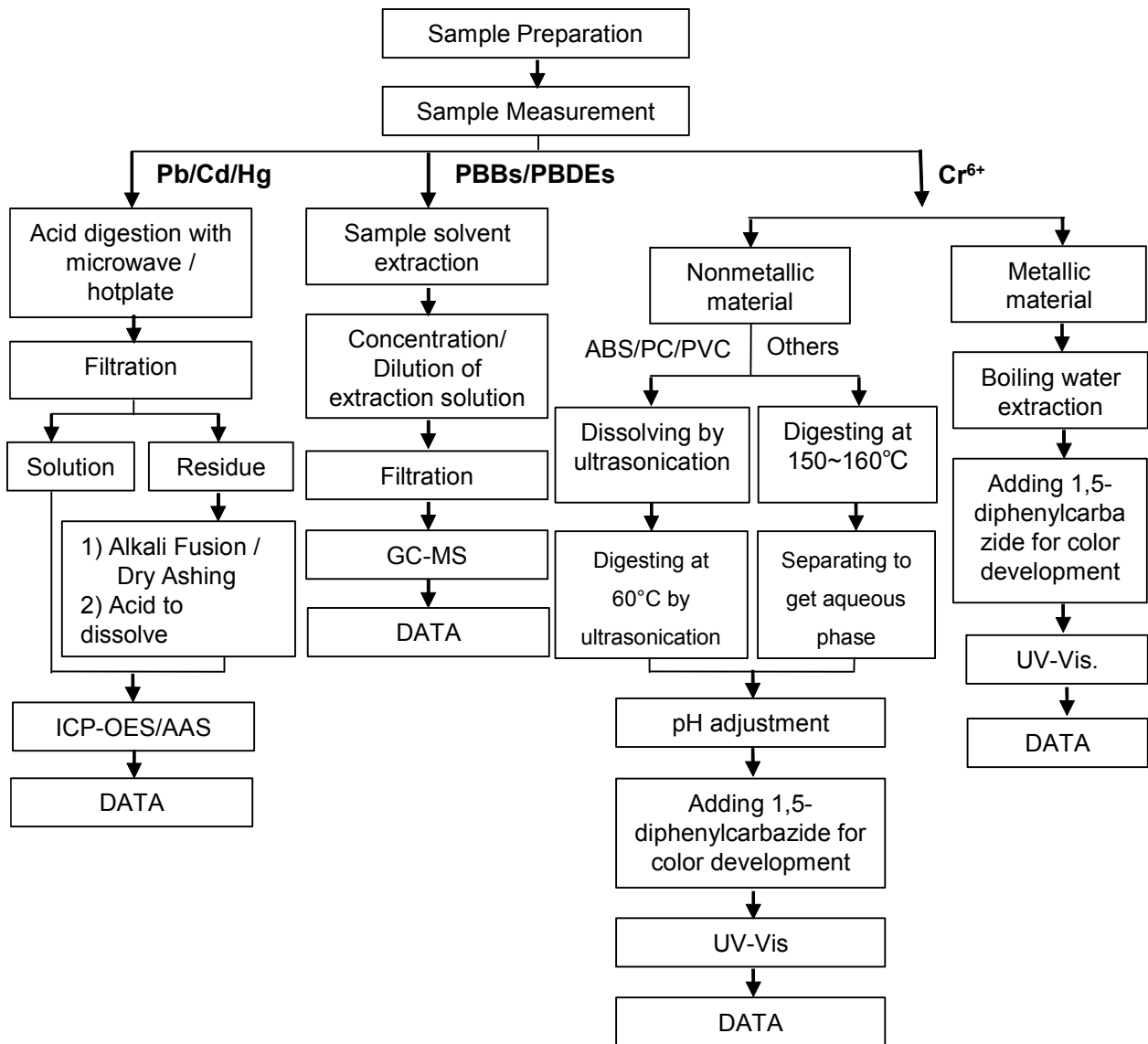
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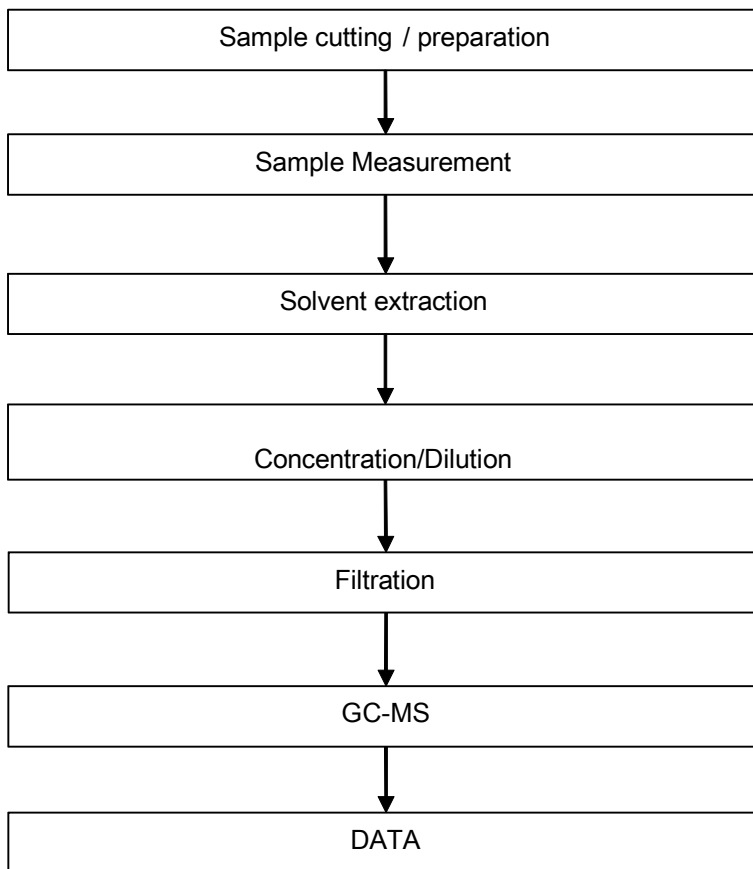
Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



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### Phthalates Testing Flow Chart

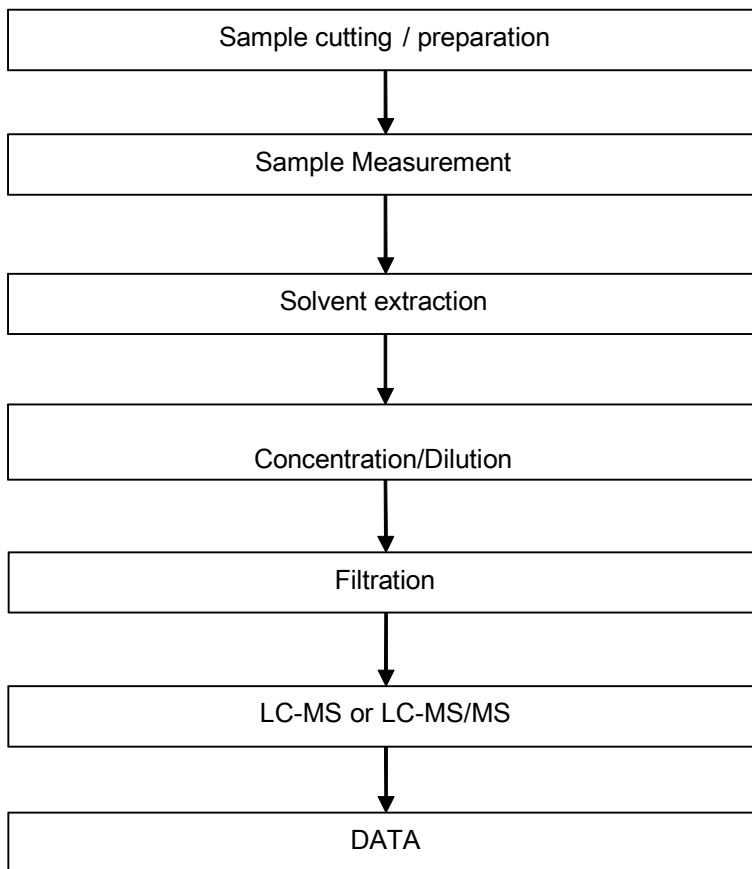


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### PFOA / PFOS Testing Flow Chart



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