

## Test Report



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Report No. A2240446873101009

Company Name  
shown on Report ASAHI SOLDER TECHNOLOGY (WUXI) CO. LTD.

Address NO. 6 CHANGJIANG ROAD WUXI NATIONAL NEW DISTRICT

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

|                      |                                |
|----------------------|--------------------------------|
| Sample Name          | Anode Ball                     |
| Model No.            | Sn 99.95%                      |
| Sample Received Date | Jul. 25, 2024                  |
| Testing Period       | Jul. 25, 2024 to Jul. 31, 2024 |

**Test Requested** As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates, Arsenic(As), Beryllium(Be), Antimony(Sb), Hexabromocyclododecane (HBCDD), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS) in the submitted sample(s).

**Test Method** Please refer to the following page(s).

**Test Result(s)** Please refer to the following page(s).



Approved by

*Chen Kaimin*Chen kaimin  
Lab Manager

Date

Jul. 31, 2024

No. R188381299

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No.1351, Wanfang Road, Minhang District, Shanghai, China

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**Test Method**

| Test Item(s)                                     | Test Method                                     | Measured Equipment(s) |
|--|---|-----------------------|
| Lead (Pb)  | IEC 62321-5:2013                                | ICP-OES               |
| Cadmium (Cd)                                     | IEC 62321-5:2013                                | ICP-OES               |
| Mercury (Hg)                                     | IEC 62321-4:2013+AMD1:2017 CSV                  | ICP-OES               |
| Hexavalent Chromium (Cr(VI))                     | IEC 62321-7-1:2015                              | UV-Vis                |
| Polybrominated Biphenyls (PBBs)                  | IEC 62321-6:2015                                | GC-MS                 |
| Polybrominated Diphenyl Ethers (PBDEs)           | IEC 62321-6:2015                                | GC-MS                 |
| Phthalates (DBP, BBP, DEHP, DIBP)                | IEC 62321-8:2017                                | GC-MS                 |
| Arsenic(As)                                      | Refer to US EPA 3050B:1996 & US EPA 6010D:2018* | ICP-OES               |
| Beryllium(Be)                                    | Refer to US EPA 3050B:1996 & US EPA 6010D:2018* | ICP-OES               |
| Antimony(Sb)                                     | Refer to US EPA 3050B:1996 & US EPA 6010D:2018* | ICP-OES               |
| Hexabromocyclododecane (HBCDD)                   | IEC 62321-9:2021                                | GC-MS                 |
| Fluorine (F)                                     | Refer to EN 14582:2016                          | IC                    |
| Chlorine (Cl)                                    | Refer to EN 14582:2016                          | IC                    |
| Bromine (Br)                                     | Refer to EN 14582:2016                          | IC                    |
| Iodine (I)                                       | Refer to EN 14582:2016                          | IC                    |
| Phthalates(DNHP/DHEXP,DPP/DPENP,DIDP, DINP,DNOP) | Refer to EN 14372:2004(E)*                      | GC-MS                 |
| Perfluorooctanoic Acid(PFOA)                     | Refer to DIN CEN/TS 15968:2010*                 | LC-MS-MS/LC-MS        |
| Perfluorooctane Sulfonates(PFOS)                 | Refer to DIN CEN/TS 15968:2010*                 | LC-MS-MS/LC-MS        |

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## Test Result(s)

| Tested Item(s)               | Result   | MDL               |
|------------------------------|----------|-------------------|
|                              | 009      |                   |
| Lead (Pb)                    | 38 mg/kg | 2 mg/kg           |
| Cadmium (Cd)                 | N.D.     | 2 mg/kg           |
| Mercury (Hg)                 | N.D.     | 2 mg/kg           |
| Hexavalent Chromium (Cr(VI)) | N.D. ▼   | 0.10 µg/cm² (LOQ) |

| Tested Item(s)                  | Result | MDL     |
|---------------------------------|--------|---------|
|                                 | 009    |         |
| Polybrominated Biphenyls (PBBs) |        |         |
| Monobromobiphenyl               | N.D.   | 5 mg/kg |
| Dibromobiphenyl                 | N.D.   | 5 mg/kg |
| Tribromobiphenyl                | N.D.   | 5 mg/kg |
| Tetrabromobiphenyl              | N.D.   | 5 mg/kg |
| Pentabromobiphenyl              | N.D.   | 5 mg/kg |
| Hexabromobiphenyl               | N.D.   | 5 mg/kg |
| Heptabromobiphenyl              | N.D.   | 5 mg/kg |
| Octabromobiphenyl               | N.D.   | 5 mg/kg |
| Nonabromobiphenyl               | N.D.   | 5 mg/kg |
| Decabromobiphenyl               | N.D.   | 5 mg/kg |

| Tested Item(s)                         | Result | MDL     |
|--|--------|---------|
|  | 009    |         |
| Polybrominated Diphenyl Ethers (PBDEs) |        |         |
| Monobromodiphenyl ether                | N.D.   | 5 mg/kg |
| Dibromodiphenyl ether                  | N.D.   | 5 mg/kg |
| Tribromodiphenyl ether                 | N.D.   | 5 mg/kg |
| Tetrabromodiphenyl ether               | N.D.   | 5 mg/kg |
| Pentabromodiphenyl ether               | N.D.   | 5 mg/kg |
| Hexabromodiphenyl ether                | N.D.   | 5 mg/kg |
| Heptabromodiphenyl ether               | N.D.   | 5 mg/kg |
| Octabromodiphenyl ether                | N.D.   | 5 mg/kg |
| Nonabromodiphenyl ether                | N.D.   | 5 mg/kg |
| Decabromodiphenyl ether                | N.D.   | 5 mg/kg |

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## Test Result(s)

| Tested Item(s)  | Result   | MDL      |
|---|----------|----------|
|   | 009      |          |
| Phthalates (DBP, BBP, DEHP, DIBP)                           |          |          |
| Dibutyl phthalate (DBP)<br>CAS#:84-74-2                     | N.D.     | 50 mg/kg |
| Butyl benzyl phthalate (BBP)<br>CAS#:85-68-7                | N.D.     | 50 mg/kg |
| Di-(2-ethylhexyl) phthalate (DEHP)<br>CAS#:117-81-7         | N.D.     | 50 mg/kg |
| Diisobutyl phthalate (DIBP)<br>CAS#:84-69-5                 | N.D.     | 50 mg/kg |
| Tested Item(s)  | Result   | MDL      |
|   | 009      |          |
| Arsenic (As)  | N.D.     | 10 mg/kg |
| Beryllium (Be)  | N.D.     | 10 mg/kg |
| Antimony (Sb)   | 27 mg/kg | 10 mg/kg |
| Tested Item(s)  | Result   | MDL      |
|   | 009      |          |
| Hexabromocyclododecane (HBCDD)                              | N.D.     | 20 mg/kg |
| Tested Item(s)  | Result   | MDL      |
|   | 009      |          |
| Fluorine (F)  | N.D.     | 10 mg/kg |
| Chlorine (Cl)   | N.D.     | 10 mg/kg |
| Bromine (Br)  | N.D.     | 10 mg/kg |
| Iodine (I)  | N.D.     | 10 mg/kg |
| Tested Item(s)  | Result   | MDL      |
|   | 009      |          |
| Phthalates  |          |          |
| Di-n-octyl phthalate (DNOP)<br>CAS#:117-84-0                | N.D.     | 50 mg/kg |
| Di-isononyl phthalate (DINP)<br>CAS#:28553-12-0,68515-48-0  | N.D.     | 50 mg/kg |
| Di-iso-decyl phthalate (DIDP)<br>CAS#:26761-40-0,68515-49-1 | N.D.     | 50 mg/kg |
| Dipentyl phthalate (DPP/DPENP)<br>CAS#:131-18-0             | N.D.     | 50 mg/kg |
| Di-n-hexyl phthalate (DNHP/DHEXP)<br>CAS#:84-75-3           | N.D.     | 50 mg/kg |

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**Test Result(s)**

| Tested Item(s)                | Result | MDL         |
|-------------------------------|--------|-------------|
|                               | 009    |             |
| Perfluorooctanoic Acid (PFOA) | N.D.   | 0.010 mg/kg |

| Tested Item(s)                    | Result | MDL         |
|-----------------------------------|--------|-------------|
|                                   | 009    |             |
| Perfluorooctane Sulfonates (PFOS) | N.D.   | 0.010 mg/kg |

**Sample/Part Description**

| No. | CTI Sample ID | Description   |
|-----|---------------|---------------|
| 1   | 009           | Silvery metal |

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

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10  $\mu\text{g}/\text{cm}^2$

-The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10  $\mu\text{g}/\text{cm}^2$ . The coating is considered a non-Cr(VI) based coating. 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.

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

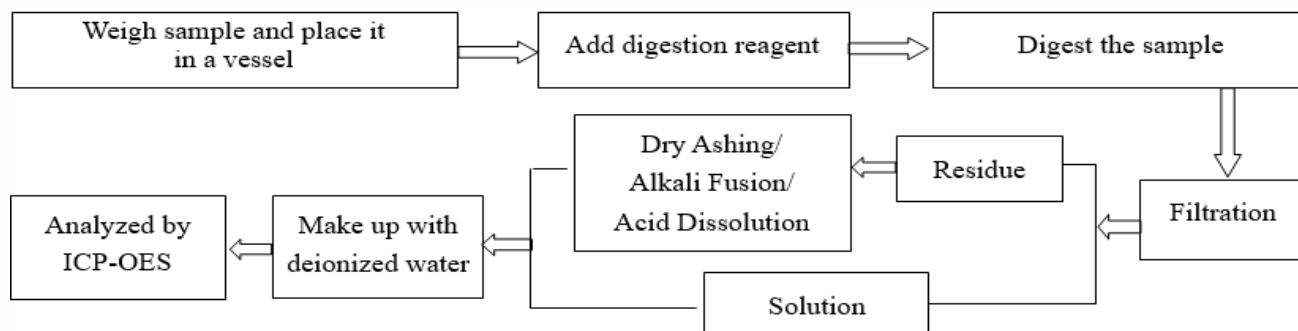
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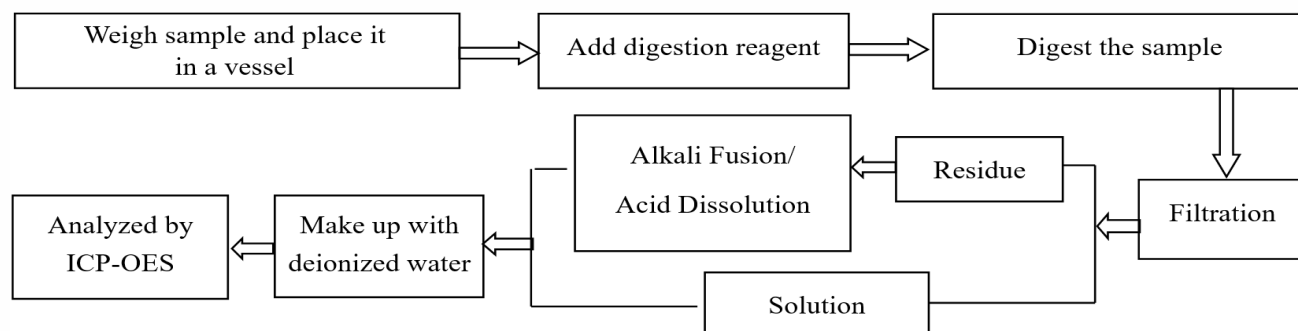
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## Test Process

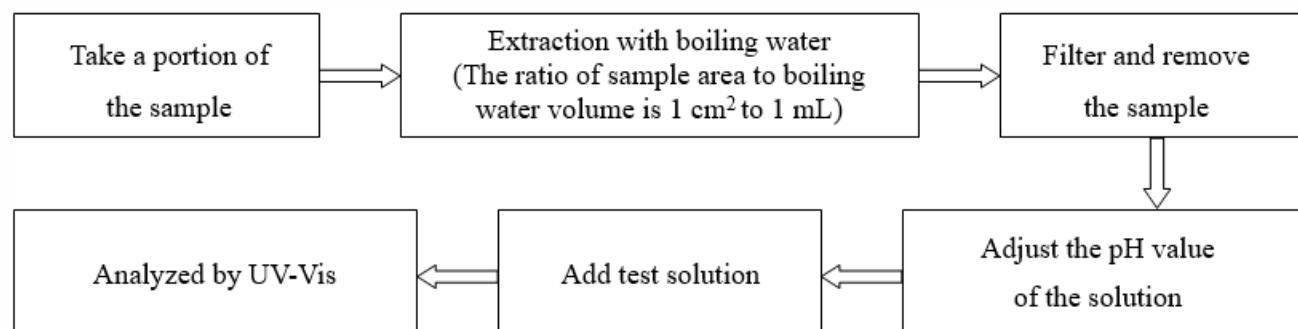
### 1. Lead (Pb), Cadmium (Cd)



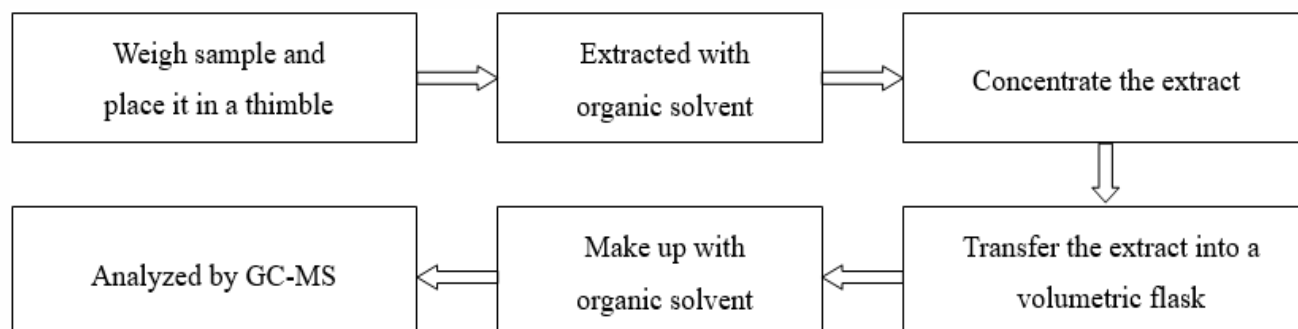
### 2. Mercury (Hg)



### 3. Hexavalent Chromium (Cr(VI))



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

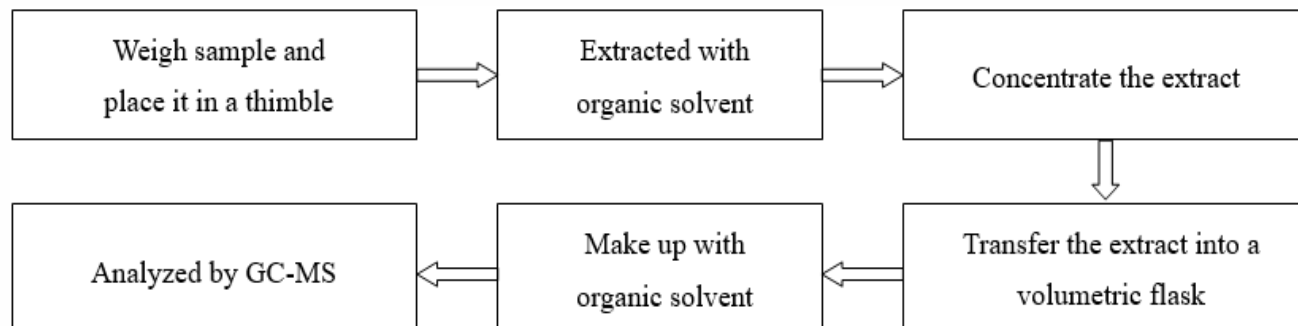


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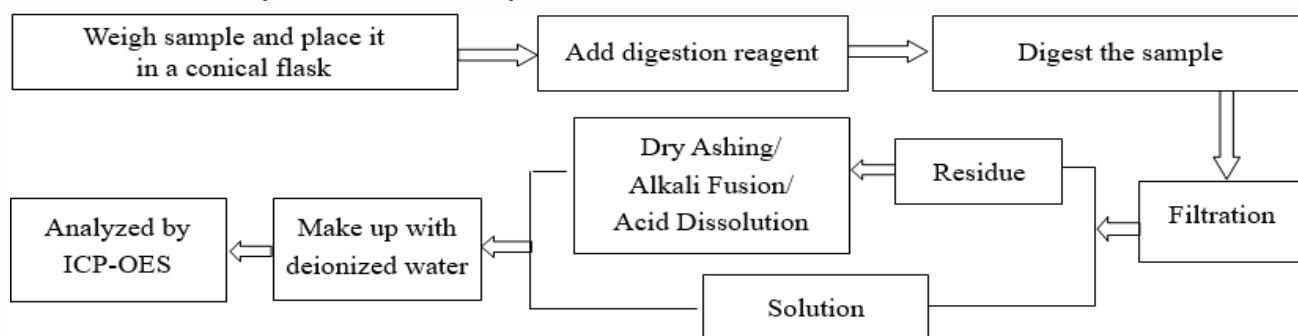
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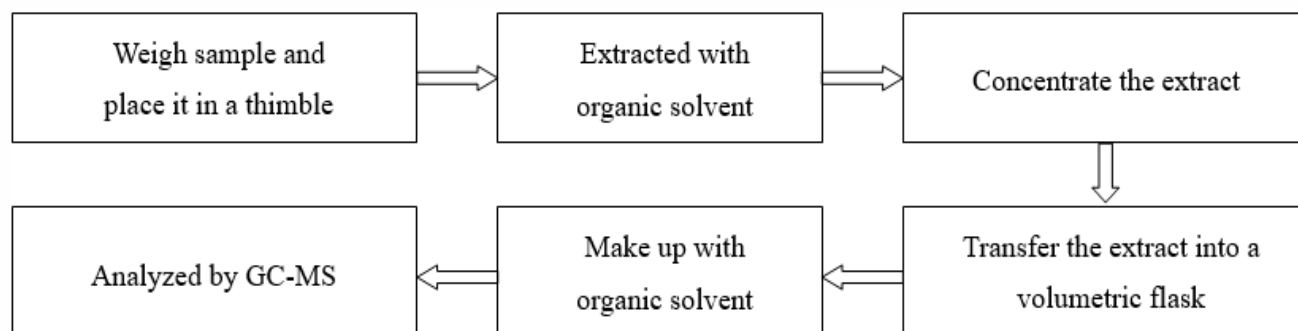
## 5. Phthalates



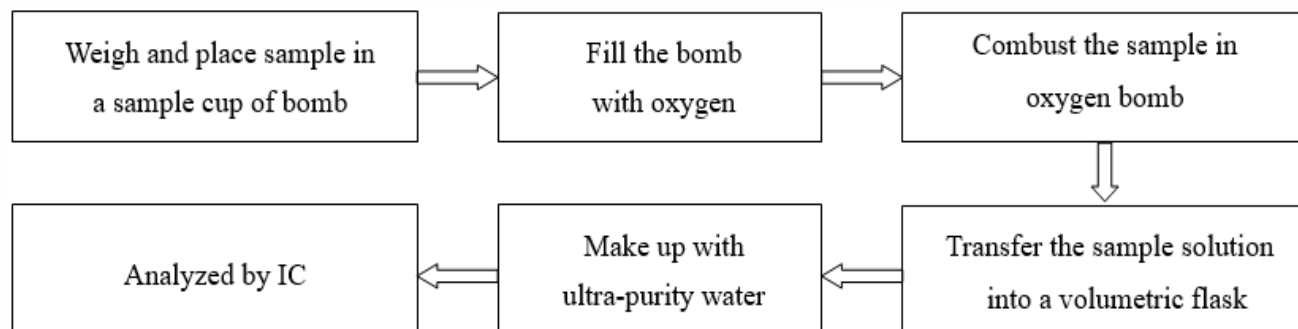
## 6. Arsenic(As), Beryllium(Be), Antimony(Sb)



## 7. Hexabromocyclododecane (HBCDD)



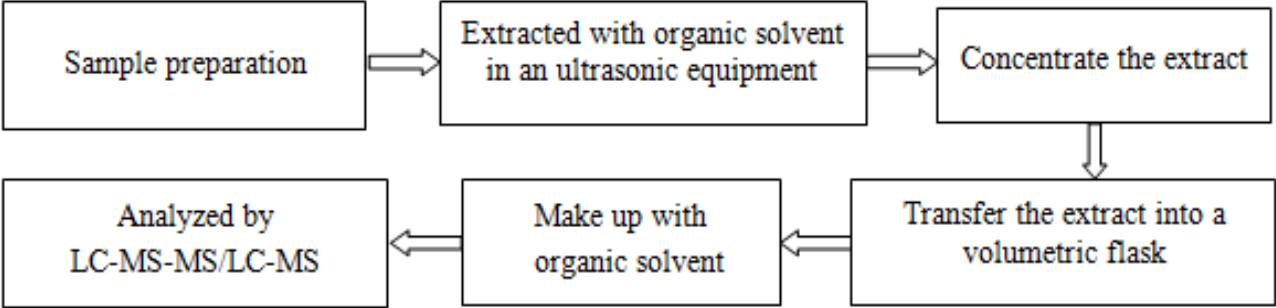
## 8. Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I)



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9. Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)





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## Photo(s) of the sample(s)



### Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* End of report \*\*\*