

Test Report

Report No. SCL011104829002

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Applicant SURPASS PRINTED CIRCUIT BOARD

Address CHIGANG INDUSTRIAL ZONE HANGANG ROAD NUMBER 669 PU TIAN FU
JIAN CHINA

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

Sample Name Gold PCB
Part No. DA-DCA
Material FR4
Sample Received Date Nov. 21, 2016
Testing Period Nov. 21, 2016 to Nov. 25, 2016

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Phthalates(DBP, BBP, DEHP, DIBP) in the submitted sample(s).

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

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



Danny Liu

Danny Liu

Danny Liu
Technical Manager

Reviewed by *Emma Xiao*

Date Nov. 25, 2016

No. R249681285

Centre Testing International Group Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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Test Method

| Test Item(s) | Test Method | Measured Equipment(s) |
|---------------------------------------|-----------------------------|-----------------------|
| Lead (Pb) | IEC 62321-5:2013 Ed.1.0 | ICP-OES |
| Cadmium (Cd) | IEC 62321-5:2013 Ed.1.0 | ICP-OES |
| Mercury (Hg) | IEC 62321-4:2013 Ed.1.0 | ICP-OES |
| Hexavalent Chromium(Cr(VI)) | IEC 62321:2008 Ed.1 Annex C | 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) | Refer to IEC 62321-8 CDV | GC-MS |

Test Result(s)

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

| Tested Item(s) | Result | MDL |
|---------------------------------------|--------|---------|
| 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 |

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| Tested Item(s) | Result | MDL |
|--|--------|---------|
| 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 |

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

Tested Sample/Part Description PCB(Tested as a whole)

Remark:

- The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.
- The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million

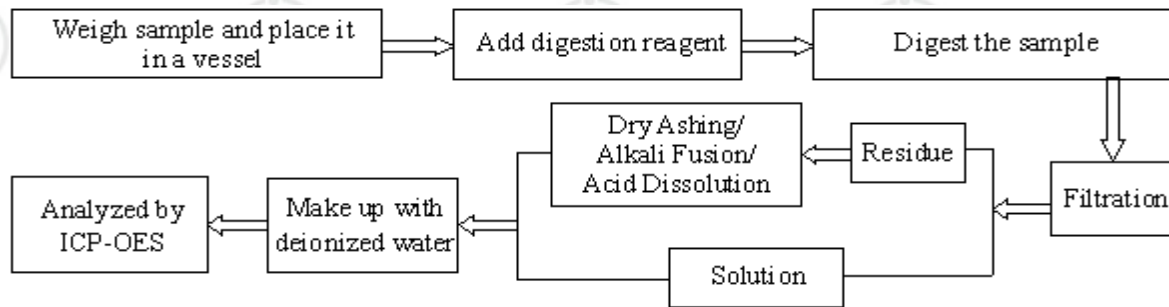
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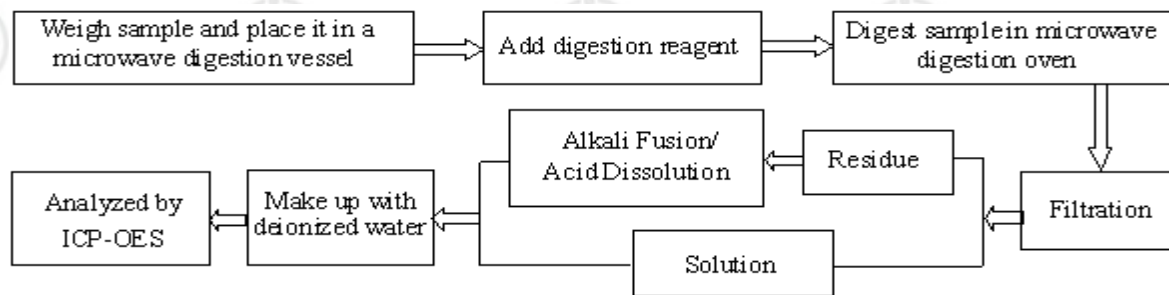
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Test Process

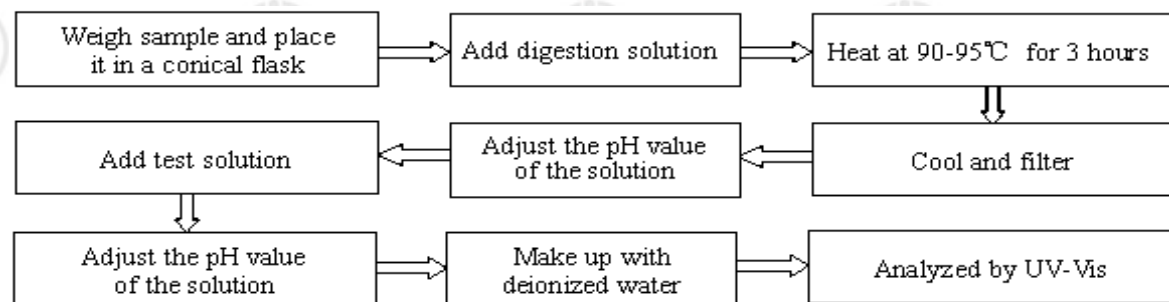
1. Lead (Pb), Cadmium (Cd)



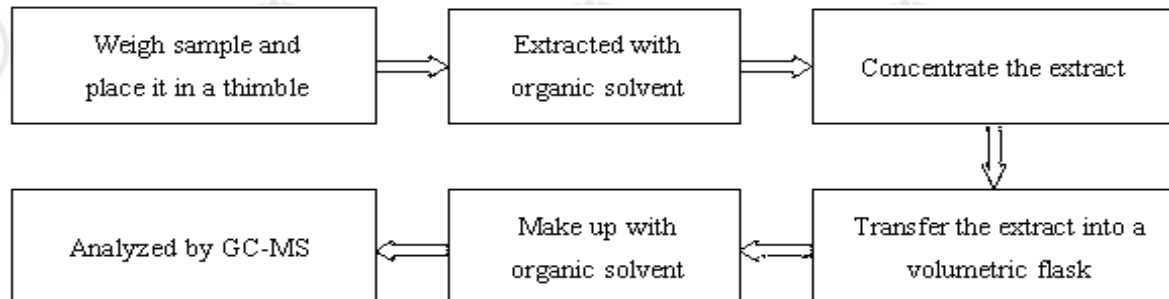
2. Mercury (Hg)



3. Hexavalent Chromium(Cr(VI))



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

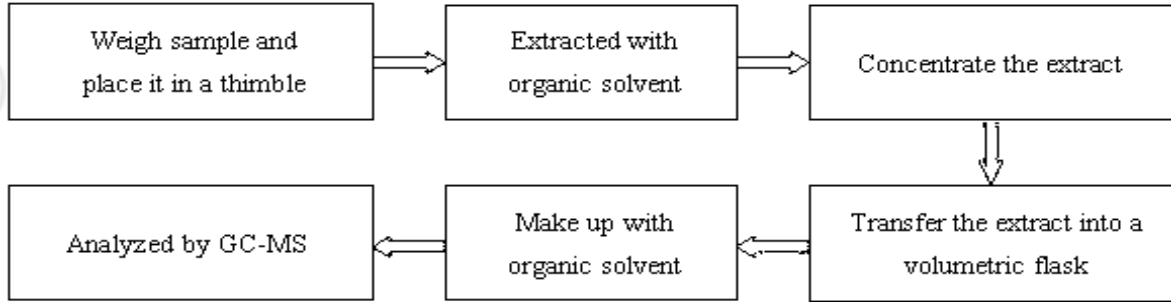


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5. Phthalates(DBP, BBP, DEHP, DIBP)

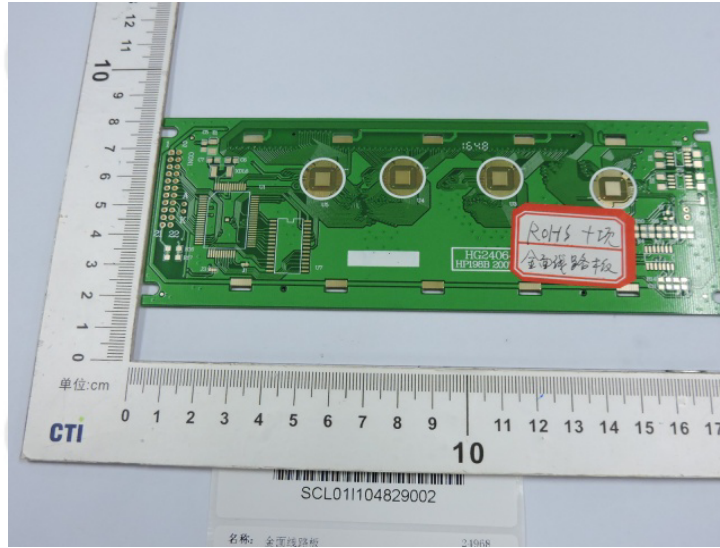


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Photo(s) of the sample(s)



*** End of report ***

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