

Test Report



Report No. A2230360639101002

Company Name shown on Report GUANGDONG QUEENDOM GROUP TECHNOLOGY CO., LTD

Address 302,NO.5,XINJI NORTH ROAD,DAFEN,WANJIANG STREET,DONGGUAN CITY, GUANGDONG PROVINCE

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

| | |
|----------------------|--------------------------------|
| Sample Name | Light-emitting diode |
| Part No. | Through hole LED, SMD LED |
| Color | white, red , blue, green |
| Sample Received Date | Jul. 21, 2023 |
| Testing Period | Jul. 21, 2023 to Jul. 28, 2023 |

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).



Approved by

Date

Jul. 28, 2023

Hill Zheng

Technical Manager

No. R177737173

CTI Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. 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 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013 | UV-Vis/ICP-OES |
| Polybrominated Biphenyls (PBBs) | IEC 62321-6:2015 | GC-MS |
| Polybrominated Diphenyl Ethers (PBDEs) | IEC 62321-6:2015 | GC-MS |
| Phthalates (DBP, BBP, DEHP, DIBP) | IEC 62321-8:2017 | GC-MS |

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Test Result(s)

| Tested Item(s) | Result | MDL |
|---|--------|---------|
| | 002 | |
| Lead (Pb) | N.D. | 2 mg/kg |
| Cadmium (Cd) | N.D. | 2 mg/kg |
| Mercury (Hg) | N.D. | 2 mg/kg |
| Hexavalent Chromium (Cr(VI)) | N.D. | 8 mg/kg |
| Tested Item(s) | Result | MDL |
| | 002 | |
| 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 |
| | 002 | |
| 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 |
|---|------------|----------|
| | 002 | |
| Phthalates (DBP, BBP, DEHP, DIBP) | | |
| Dibutyl phthalate (DBP) CAS#:84-74-2 | 5438 mg/kg | 50 mg/kg |
| Butyl benzyl phthalate (BBP) CAS#:85-68-7 | N.D. | 50 mg/kg |
| Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7 | N.D. | 50 mg/kg |
| Diisobutyl phthalate (DIBP) CAS#:84-69-5 | N.D. | 50 mg/kg |

Sample/Part Description

| No. | CTI Sample ID | Description |
|-----|---------------|-----------------------------|
| 1 | 002 | Mixed test, all parts(body) |

Remark:

- The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.
- As specified by client, the test was conducted by mixing several samples together. 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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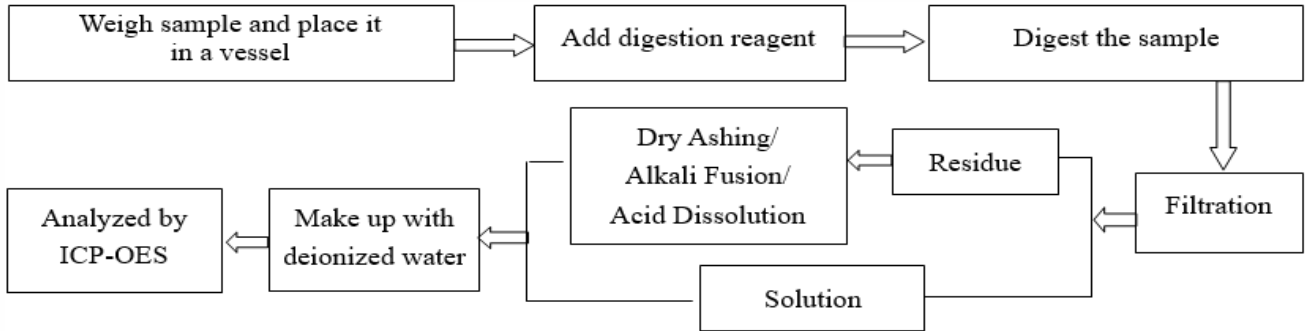
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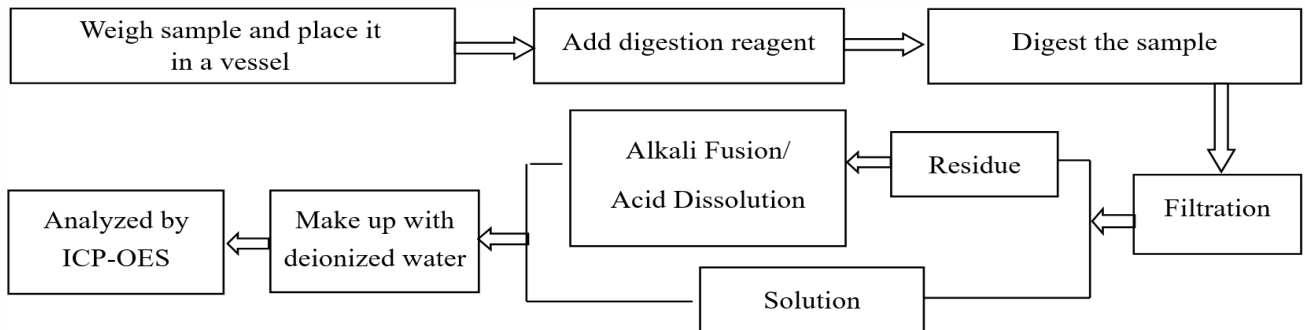
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Test Process

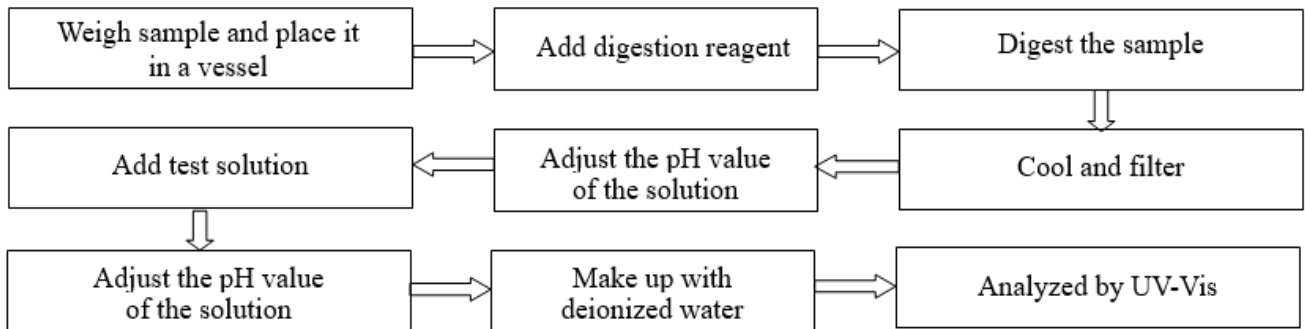
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



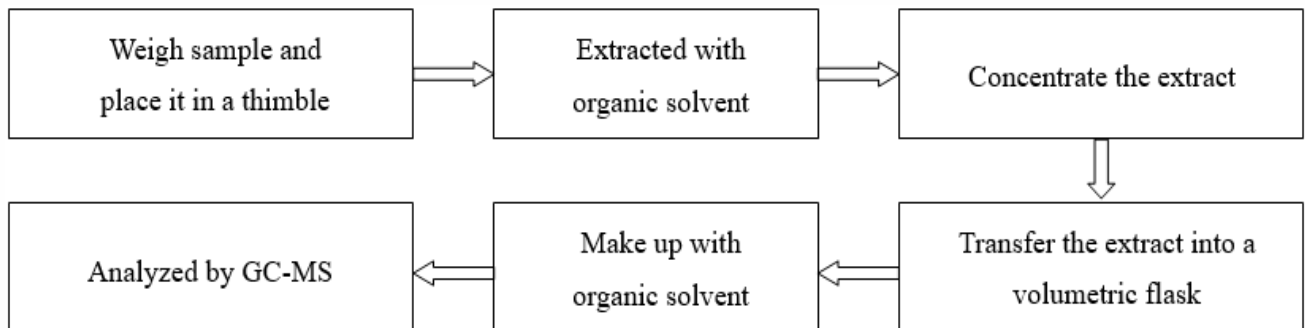
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

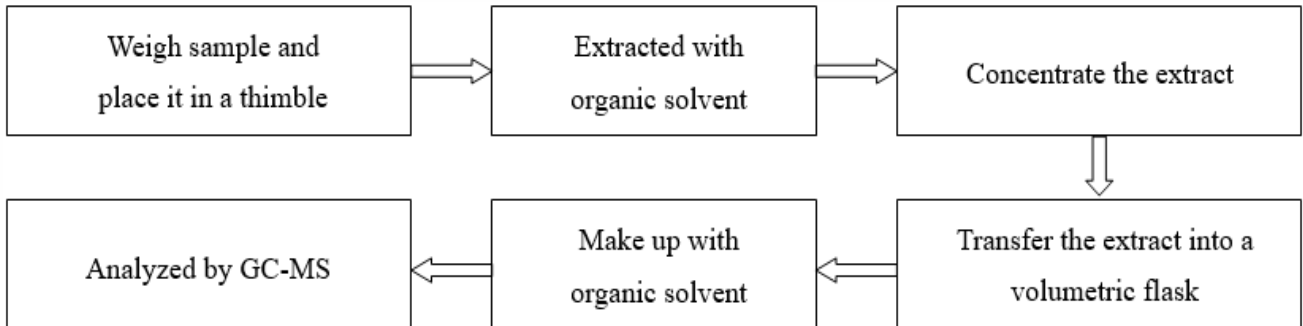


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5. Phthalates (DBP, BBP, DEHP, DIBP)



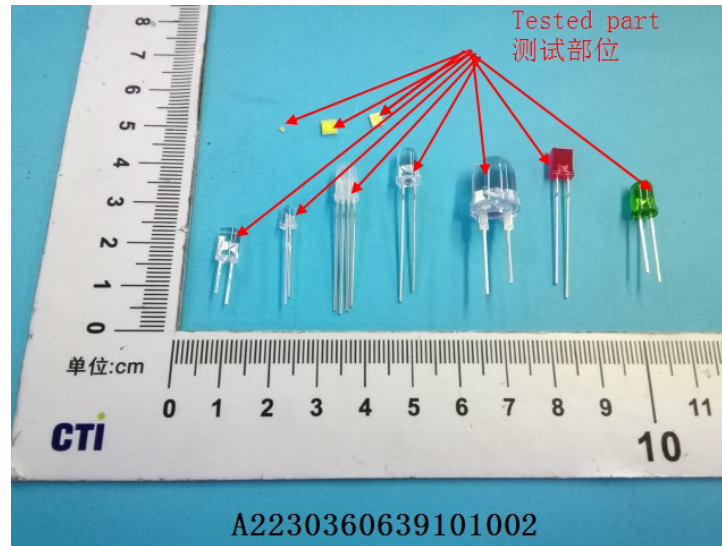
华测检测

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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. Without written approval of CTI, this report can't be reproduced except in full;
5. 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 ***