



Test Report

Report No. A2190008584101005

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Applicant NANTONG HUADA MICROELECTRONICS GROUP CO., LTD

Address NO.99 ZILANG ROAD ,NANTONG CITY ,JIANGSU PROVINCE

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

Sample Name TO-94
Client Reference Information TO-92S
Sample Received Date Jan. 11, 2019
Testing Period Jan. 11, 2019 to Jan. 15, 2019

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

Tested by

Wangdong

Reviewed by

Alisa

Approved by

Chen kaimin

Date

Jan. 15, 2019

Chen kaimin

Lab Manager

No. R293031267

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

No. 1996, Xinqinqiao Road, Pudong New District, Shanghai, China



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Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead(Pb)	IEC 62321-5:2013	ICP-OES
Cadmium(Cd)	IEC 62321-5:2013	ICP-OES
Mercury(Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium(Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
	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

Test Result(s)

Tested Item(s)	Result		MDL
	001	002	
Lead (Pb)	N.D.	15 mg/kg	2 mg/kg
Cadmium (Cd)	N.D.	N.D.	2 mg/kg
Mercury (Hg)	N.D.	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	—	8 mg/kg
	—	N.D. ▼	0.10 µg/cm ² (LOQ)

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

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

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

Tested Sample/Part Description

- 001 Black body (Tested as a whole)
- 002 Metal pin with silvery plating

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 or LOQ)

-mg/kg = ppm = parts per million

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

-▼ The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 µg/cm². The coating is considered a non-Cr(VI) based coating.

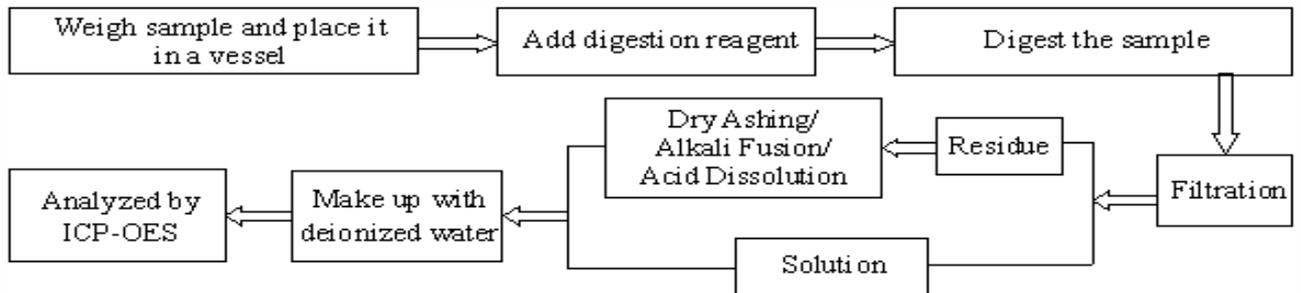
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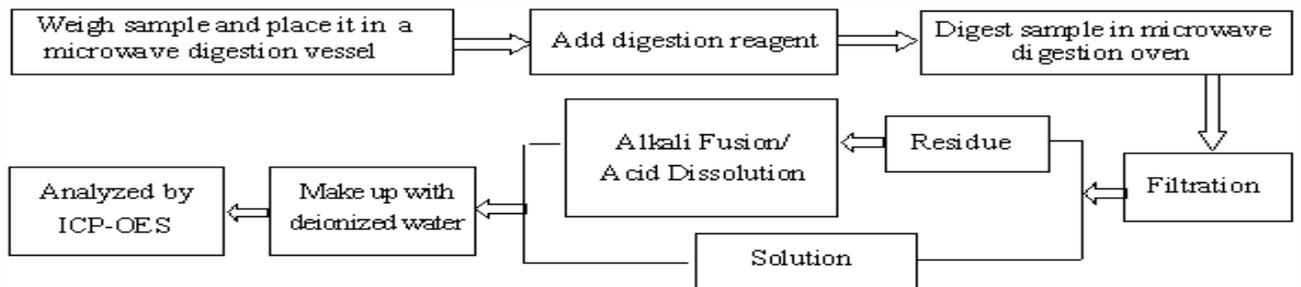
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Test Process

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

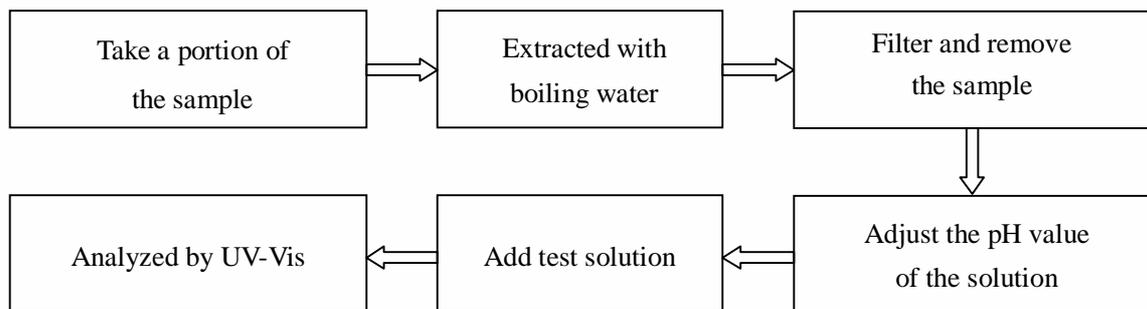


2. Mercury(Hg)

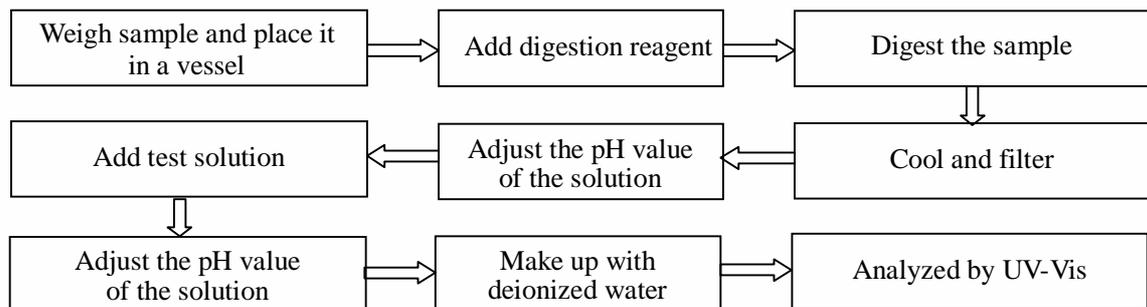


3. Hexavalent Chromium (Cr(VI))

(1) IEC 62321-7-1:2015



(2) IEC 62321-7-2:2017



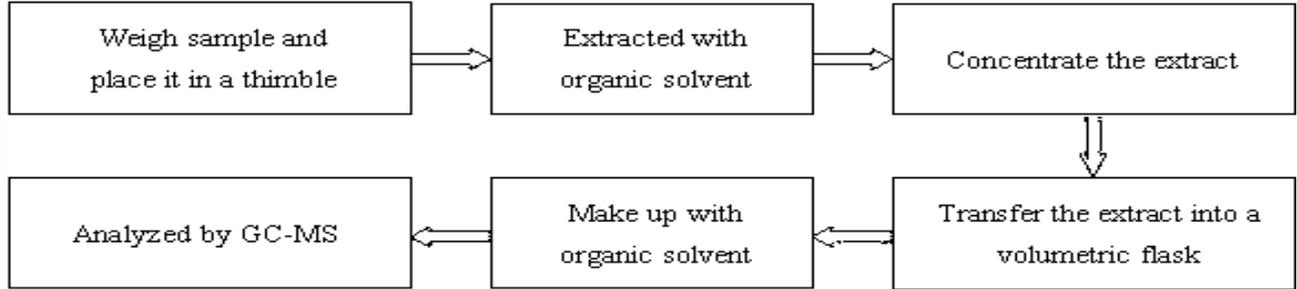
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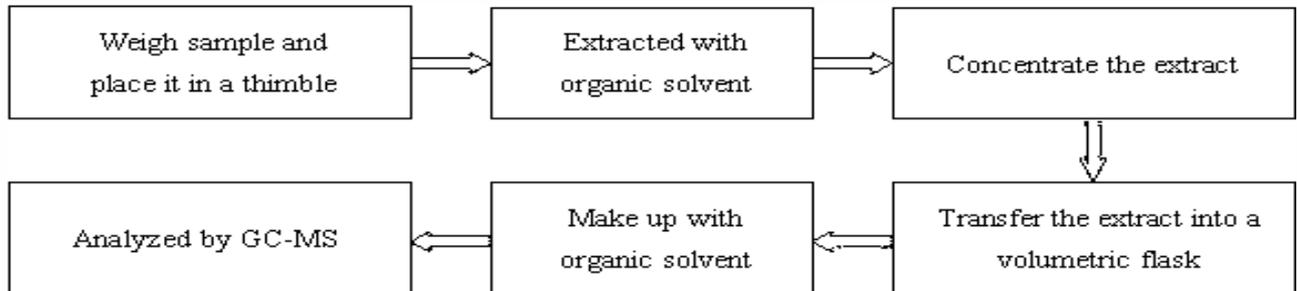
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4. Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers (PBDEs)



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

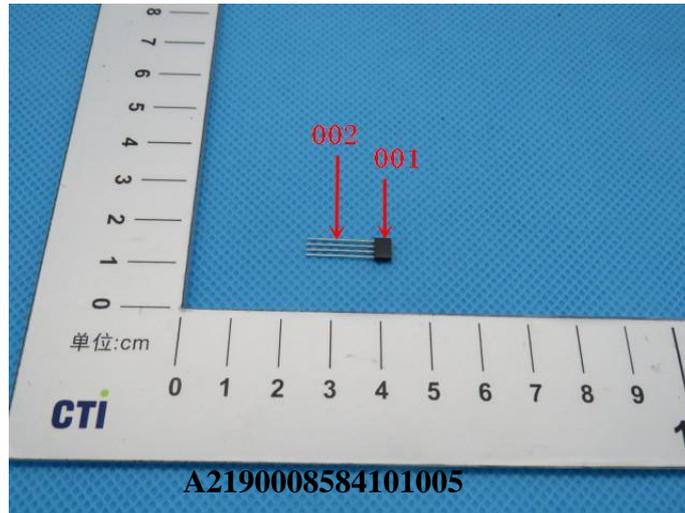


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Photo(s) of the sample(s)



*** End of Report ***

Statement:

1. This report is considered invalidated without approval signature, special seal and the seal on the perforation;
2. The sample(s) and sample information was/were provided by the client 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;
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