

Test Report



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Report No. A2220249847101008

Company Name shown on Report ZHEJIANG RECTRON ELECTRONIC CO.,LTD.

Address 28# LIZHENG ROAD, HUIMIN DISTRICT,JIASHAN COUNTY, JIAXING CITY,ZHEJIANG PROVINCE, CHINA

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

Sample Name Dice Wafer
Material Si
Sample Received Date Jun. 18, 2022
Testing Period Jun. 18, 2022 to Jun. 23, 2022

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, Antimony(Sb), Chlorine (Cl), Bromine (Br) in the submitted sample(s).

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

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



Tested by

Zai Muhui

Approved by

Chen Kaimin

Chen kaimin
Lab Manager

Reviewed by

Chen Rui

Date

Jun. 23, 2022

No. R188381812

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 62321-7-2:2017 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
Antimony(Sb)	Refer to US EPA 3052:1996 & US EPA 6010D:2018*	ICP-OES
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Phthalates	IEC 62321-8:2017	GC-MS

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Test Result(s)

Tested Item(s)	Result	MDL
Lead (Pb)	95039 mg/kg* ¹	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
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
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
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 Item(s)		
Antimony (Sb)	N.D.	10 mg/kg
Tested Item(s)		
Chlorine (Cl)	N.D.	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
*Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
*Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg
*Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	50 mg/kg
*N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	100 mg/kg
*Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	50 mg/kg

Sample/Part Description Wafer

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Antimony.**
 -*¹=According to the client's statement, the material of the sample(s) fall into exemption items 7(c)-I according to EU Directive 2011/65/EU: Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.
 -MDL = Method Detection Limit
 -N.D. = Not Detected (<MDL)
 -mg/kg = ppm = parts per million

Note: **** indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

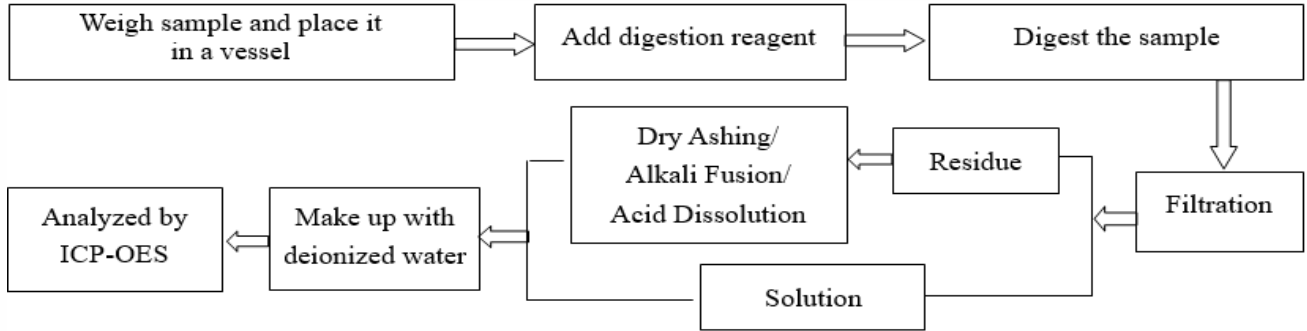
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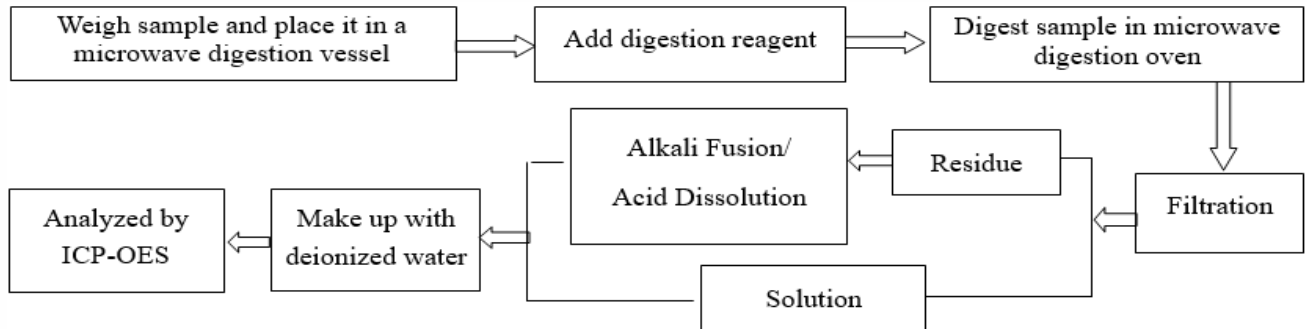
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Test Process

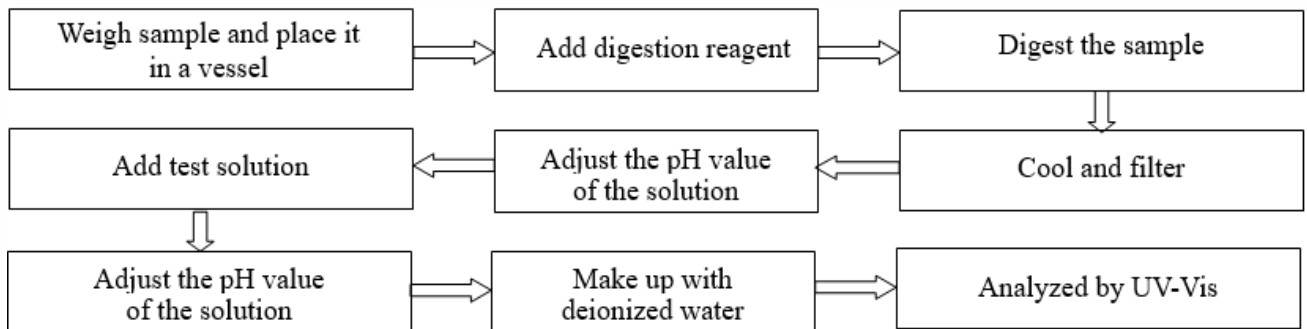
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



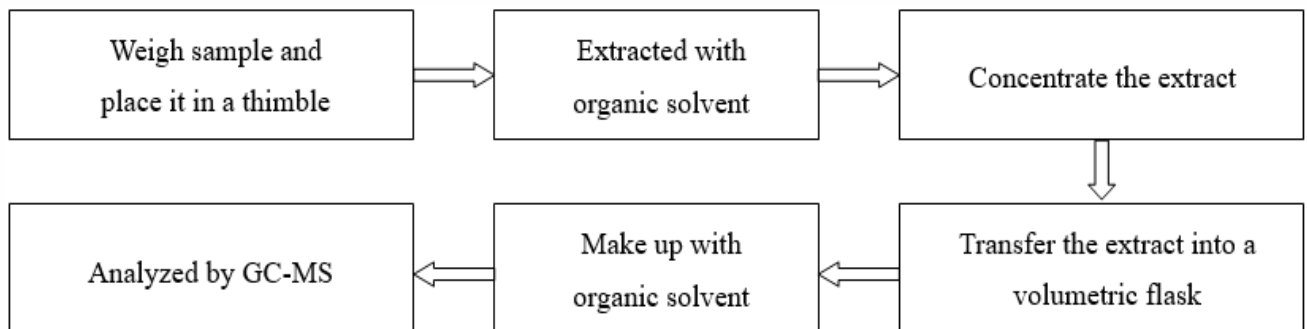
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

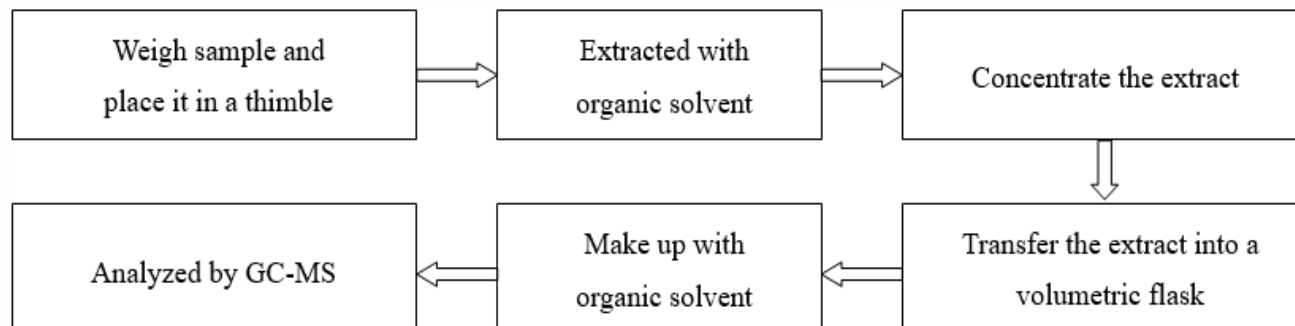


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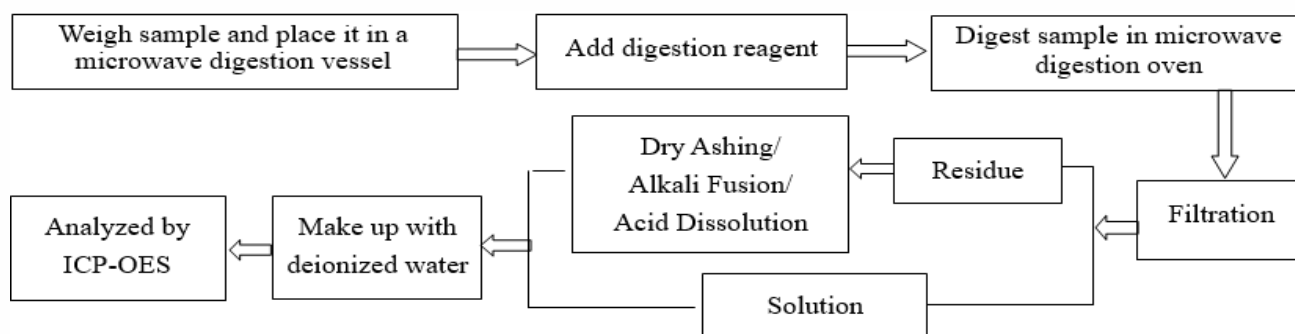
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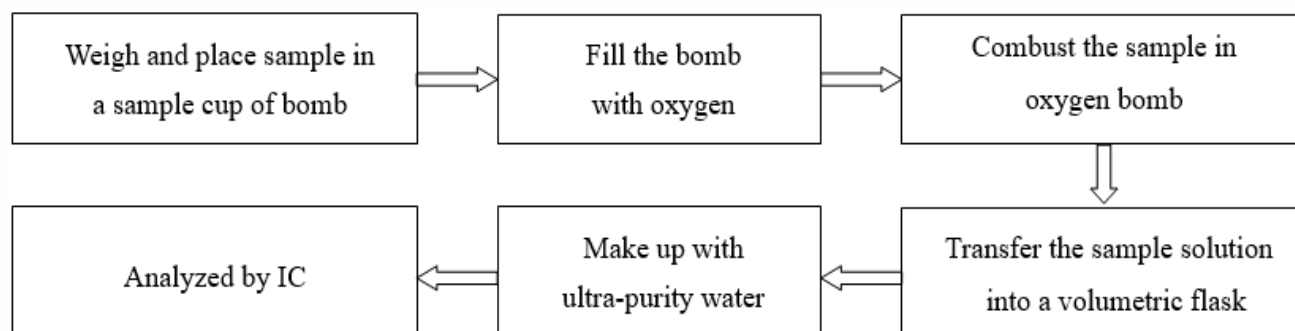
5. Phthalates



6. Antimony(Sb)



7. Chlorine (Cl), Bromine (Br)



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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 ***

Appendix

Client Reference Information

0402/0603/1.5KE/A405/AKM/BDB/BR-10/BR-15W/BR-3/BR-6/BR-8/BKM/CSP/D2PAK/D3K/DB/BDB/DBLS/DBS/DFN5x6EP/DFN0603/DFN0603-2L/DFN1006/DFN1006-2/2L/DFN1006-3/3L/DFN1610/DFN2.6*2.6-10L/DFN2x2-3L/DFN2510/DFN2X2-6L/DFN3.3X3.3/DFN3x3/DFN4120-10L/DFN5x6/DFN5X6-8L/DFNWB0.6*0.3/DI5/DO15/DO201AD/DO-213AB/DO218/DO218AB/DO277/DO34/DO35/DO41/DO41G/DPAK/TO252/ESOP-8/HR-MS/HVM/HVML/HVP/ITO220/ITO220A/ITO220AC/KBL/KBP/KBPG/LL34/LL41/LMDS/MB-F/MBM/MDA/MDC/MDF/MDK/MDS/MDSJ/MELF/MICRO-MELF/MINI-MELF/MP-15/MP-15W/MP-25/MP-25W/MP-35/MP-35W/MP-40/MP-50/MP-50W/MSBM/MSBS/MSOP10/MT-35/MT-35W/PDFN5X6P/PPAK3x3/PPAK5X6/PQFN2X2/PDFN2X2/R1/R1000H/R12000H/R10KH/R12KH/R16KH/R2/R3/R30KH/R4/R5/R6/R7/R8KH/R9KH/RB-15/RBU/RBUH/RC-2/RS1/RS1L/RS10M/RS10MLS/RS15M/RS15MLS/RS1M/RS2/RS20M/RS20MLS/RS25M/RS25MLS/RS2L/RS2M/RS30M/RS35M/RS35TB/RS40M/RS-485/RS4L/RS4M/RS50M/RS6/RS6L/RS60M/RS6M/RS-6MLS/RS8/RS8L/RS8M/S35VB/S50VB/SBR/SC-75/SOT416/SKBPC/SLDBS/SlimPAQ/SlimPAQ-1/SLMDS/SLPDS/SMA (DO214AC)/SMAF/SMA-S/SMB (DO214AA)/SMBF/SMB-F/SMC (DO214AB)/SMX/SOD123/SOD123F/SOD123F(L)/SOD123F(L)-1/SOD123FH/SOD123FL/SOD123S/SOD123ST/SOD123FL-1/SOD323/SOD323F/SOD523/SOD523F/SOD723/SOD80C/SOD882/SOD923/SOF2-4/SOP-8L/SOP-14/SOP-8/SOT89/SOT143/SOT223/SOT223-2L/3L/SOT227/SOT23/SOT23-3L/SOT23-3S/SOT23-5/SOT236/SOT23-6/6L/SOT26/SOT323/SOT323FL/SC70/SOT346/SOT353/SOT363/SOT363-6L/SOT523/SOT563/SOT723/SOT883/SOT89/SOT89-3L/SSOD923/SSOT-6L/Sub-SMA/TO126/TO263/TO220/TO220-3L/TO220A/TO220A-1/TO220AB/TO220AC/TO220C/TO220F/TO220FAC/TO247/TO247-3L/TO247S/TO251/TO252-5L/TO3P/TO92/TO92L/TO92S/TOLL9/TQFN16/TSOT23-5/TDFN2x2-6L/TSOT23-6L/TSSOP14/TSSOP-8/TO126/TO126F/TO262/TO252-4L/TO-3P/UDFN-3L/WBFBP-02C/WOM/X3DFN2

Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2220249847101008.