



Test Report

Report No. A2240315771101012

Page 1 of 27

Company Name ZHEJIANG RECTRON ELECTRONIC CO.,LTD.**shown on Report****Address** 28# LIZHENG ROAD, HUIMIN DISTRICT,JIASHAN COUNTY, JIAXING CITY,ZHEJIANG PROVINCE, CHINA/111# CHENGGONG ROAD, HUIMIN DISTRICT,JIASHAN COUNTY, JIAXING CITY,ZHEJIANG PROVINCE, CHINA**Sample Received Date** Jun. 11, 2024**Testing Period** Jun. 11, 2024 to Jun. 18, 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), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Phthalates,Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS) , Asbestos in the submitted sample(s).

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



Approved by

Chen Kaimin

Chen Kaimin

Approved Signatory

Jason Zhang

Jason Zhang

Approved Signatory

No. R748861269

19 2024

Inspection & Testing Services

Centre Testing International Pinbiao(Shanghai) Co., Ltd. No.1351, Wanfang Road, Minhang District, Shanghai, China

Test Report

Report No. A2240315771101012

Page 2 of 27

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

CTI Sample ID	Sample Name(s)	Material	Reference Report No. - CTI Sample ID
001	Bonding Wire	Cu	A2240315771101001
002	Coating / Silicon Rubber	Silicon Rubber	A2240315771101002
003	Solder Paste	pb、Sn、Ag	A2240315771101003-003
004	Solder Wafer	pb、Sn、Ag	A2240315771101004
005	Plating	Sn	A2240315771101005
006	Lead Wire/Lead Frame	Cu	A2240315771101006
007	Dice Wafer	Si	A2240315771101007
008	HF Molding	Epoxy	A2240315771101008
010	Ink	--	A2240315771101010
011	Solder Paste	pb、Sn、Ag	A2240315771101003-011

Remark:

The samples with the reference information in the table above are non-tested in this report. According to the client's statement, test results and the photos of the " CTI Sample ID " column reference to "Reference Report Number - CTI Sample ID " column.

Test Report

Report No. A2240315771101012

Page 3 of 27

Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
	Refer to IEC 62321-5:2013	
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
	Refer to IEC 62321-5:2013	
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
	Refer to IEC 62321-4:2013+AMD1:2017 CSV	
Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
	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
Beryllium(Be)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018*	ICP-OES
	Refer to US EPA 3052:1996 & US EPA 6010D:2018*	
Antimony(Sb)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018*	ICP-OES
	Refer to US EPA 3052:1996 & US EPA 6010D:2018*	
Fluorine (F)	Refer to EN 14582:2016	IC
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Phthalates(BBP,DMEP,DEHP,DBP,DNHP/DHEXP,DPP/DPENP,DIBP,DIDP,DINP,DIPP,DNOP,NIPP)	Refer to EN 14372:2004(E)*	GC-MS
Perfluorooctanoic Acid(PFOA)	CEN/TS 15968:2010*	LC-MS-MS/LC-MS
Perfluorooctane Sulfonates(PFOS)	CEN/TS 15968:2010*	LC-MS-MS/LC-MS
Asbestos	ISO 22262-1:2012+NIOSH 9000:2015+NIOSH 9002:1994	PLM+XRD

Test Report

Report No. A2240315771101012

Page 4 of 27

Test Result(s)

Tested Item(s)	Result			MDL
	001	002	003	
Lead (Pb)	N.D.	N.D.	911304 mg/kg* ¹	2 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D. ▼	--	N.D. ▼	0.10 µg/cm ² (LOQ)
	--	N.D.	--	8 mg/kg

Tested Item(s)	Result			MDL
	004	005	006	
Lead (Pb)	904620 mg/kg* ¹	38 mg/kg	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D. ▼	N.D. ▼	N.D. ▼	0.10 µg/cm ² (LOQ)
	--	--	--	8 mg/kg

Tested Item(s)	Result			MDL
	007	008	010	
Lead (Pb)	30417 mg/kg* ²	N.D.	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	--	--	--	0.10 µg/cm ² (LOQ)
	N.D.	N.D.	N.D.	8 mg/kg

Tested Item(s)	Result	MDL
	011	
Lead (Pb)	2151 mg/kg* ³	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	--	0.10 µg/cm ² (LOQ)
	N.D.	8 mg/kg

Test Report

Report No. A2240315771101012

Page 5 of 27

Tested Item(s)	Result			MDL
	002	007	008	
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg

Tested Item(s)	Result		MDL
	010	011	
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	N.D.	5 mg/kg

Test Report

Report No. A2240315771101012

Page 6 of 27

Tested Item(s)	Result			MDL
	002	007	008	
Polybrominated Diphenyl Ethers (PBDEs)				
Monobromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg

Tested Item(s)	Result		MDL
	010	011	
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	N.D.	5 mg/kg

Test Report

Report No. A2240315771101012

Page 7 of 27

Tested Item(s)	Result			MDL
	001	003	004	
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	006	
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

Test Report

Report No. A2240315771101012

Page 8 of 27

Tested Item(s)	Result			MDL
	001	003	004	
Polybrominated Diphenyl Ethers (PBDEs)				
Monobromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	006	
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

Test Report

Report No. A2240315771101012

Page 9 of 27

Tested Item(s)	Result			MDL
	002	007	008	
Phthalates (DBP, BBP, DEHP, DIBP)				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg

Tested Item(s)	Result		MDL
	010	011	
Phthalates (DBP, BBP, DEHP, DIBP)			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	50 mg/kg

Tested Item(s)	Result			MDL
	001	003	004	
Phthalates (DBP, BBP, DEHP, DIBP)				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg

Test Report

Report No. A2240315771101012

Page 10 of 27

Tested Item(s)	Result	MDL
	006	
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)	Result	MDL
	005	
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

Test Report

Report No. A2240315771101012

Page 11 of 27

Tested Item(s)	Result	MDL
	005	
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
	005	
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)	Result			MDL
	001	003	004	
Beryllium (Be)	N.D.	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	006	
Beryllium (Be)	N.D.	10 mg/kg

Test Report

Report No. A2240315771101012 Page 12 of 27

Tested Item(s)	Result	MDL
	005	
Beryllium (Be)	N.D.	10 mg/kg

Tested Item(s)	Result		MDL
	007	011	
Beryllium (Be)	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result			MDL
	001	003	004	
Antimony (Sb)	N.D.	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	006	
Antimony (Sb)	N.D.	10 mg/kg

Tested Item(s)	Result			MDL
	002	007	008	
Antimony (Sb)	N.D.	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result		MDL
	010	011	
Antimony (Sb)	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	005	
Antimony (Sb)	N.D.	10 mg/kg

Test Report

Report No. A2240315771101012

Page 13 of 27

Tested Item(s)	Result			MDL
	002	003	007	
Fluorine (F)	N.D.	N.D.	N.D.	10 mg/kg
Chlorine (Cl)	N.D.	N.D.	N.D.	10 mg/kg
Bromine (Br)	N.D.	N.D.	N.D.	10 mg/kg

Tested Item(s)	Result			MDL
	008	010	011	
Fluorine (F)	N.D.	N.D.	N.D.	10 mg/kg
Chlorine (Cl)	121 mg/kg	246 mg/kg	N.D.	10 mg/kg
Bromine (Br)	N.D.	N.D.	2523 mg/kg	10 mg/kg

Tested Item(s)	Result			MDL
	001	002	003	
Phthalates				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	N.D.	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	N.D.	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	N.D.	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	N.D.	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	N.D.	N.D.	50 mg/kg
Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	N.D.	N.D.	50 mg/kg

Test Report

Report No. A2240315771101012

Page 14 of 27

Tested Item(s)	Result			MDL
	001	002	003	
Phthalates				
N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	N.D.	N.D.	100 mg/kg

Tested Item(s)	Result			MDL
	004	005	006	
Phthalates				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	N.D.	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	N.D.	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	N.D.	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	N.D.	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	N.D.	N.D.	50 mg/kg
Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	N.D.	N.D.	50 mg/kg
N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	N.D.	N.D.	100 mg/kg

Test Report

Report No. A2240315771101012

Page 15 of 27

Tested Item(s)	Result			MDL
	007	008	010	
Phthalates				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	N.D.	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	N.D.	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	N.D.	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	N.D.	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	N.D.	N.D.	50 mg/kg
Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	N.D.	N.D.	50 mg/kg
N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	N.D.	N.D.	100 mg/kg

Tested Item(s)	Result	MDL
	011	
Phthalates		
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

Test Report

Report No. A2240315771101012

Page 16 of 27

Tested Item(s)	Result	MDL
	011	
Phthalates		
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
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	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

Tested Item(s)	Result	MDL
	010	
Perfluorooctanoic Acid (PFOA)	N.D.	0.010 mg/kg

Tested Item(s)	Result	MDL
	010	
Perfluorooctane Sulfonates (PFOS)	N.D.	0.010 mg/kg

Material Category	Substances/CAS Numbers	Results
		001
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Test Report

Report No. A2240315771101012

Page 17 of 27

Material Category	Substances/CAS Numbers	Results
		002
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		003
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		004
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		005
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Test Report

Report No. A2240315771101012

Page 18 of 27

Material Category	Substances/CAS Numbers	Results
		006
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		007
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		008
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Material Category	Substances/CAS Numbers	Results
		010
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Test Report

Report No. A2240315771101012 Page 19 of 27

Material Category	Substances/CAS Numbers	Results
		011
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

Sample/Part Description

No.	CTI Sample ID	Description
1	001	Cupreous metal wire
2	002	White solid(dry weight) *4
3	003	Silvery metal
4	004	Silvery metal
5	005	Silvery plating
6	006	Cupreous metal
7	007	Chip
8	008	Dark grey solid
9	010	Silvery ink(dry weight) *5
10	011	Brown paste(dry weight) *4

Test Report

Report No. A2240315771101012

Page 20 of 27

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

-N.A.D.= No Asbestos Detected(<Limit of detection)

-*¹= According to the client's statement, the material of the sample(s) fall into exemption items 7(a) according to EU Directive 2011/65/EU: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

-*²= 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

-*³=According to the client's statement, lead mainly comes from the high melting temperature type solders. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead) is exempted from the restriction, with reference to EU Directive 2011/65/EU annex III Exemption Applications 7(a).

-*⁴= The sample was tested after drying for 2 hours under 105°C.

-*⁵= Test product curing conditions: first 105 °C, 2 hours; Second 180 °C, 2 hours.

- Information Statement: Different Part No. or sample name with different buyer.

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

Explanation (Asbestos)

-The limit of detection of this method is defined as the detection and identification of one fibre or fibre bundle in the amount of sample examined. With appropriate matrix reduction procedures that are tailored to the nature of the sample, the limit of detection can be significantly lower than 0.1%.

-The estimated concentration(s) of the asbestos varieties detected in ranges is/are as follows: Trace (<0.1%), 0.1%~5%, 5%~50%, and 50%~100%.

-Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarized light microscopy. These materials often contain milled asbestos with too small fibre diameter and length to be detected.

-X-ray diffraction analysis cannot discriminate the particle shape in analytical sample and detects not only asbestos of fibrous form but also non-fibrous minerals related to asbestos such as serpentine minerals and/or amphibole minerals if they coexist.

-CTI Asbestos Testing Center has established strict quality assurance and supervision procedures in accordance with international standard. And the laboratory participates in the AIMS* every year (three times per year) to confirm our proficiency.

*The Asbestos in Materials Scheme (AIMS) is an international inter-laboratory testing scheme, and it is managed by the Health and Safety Laboratory (HSL) which on behalf of the Health and Safety Executive (HSE) of UK.

Test Report

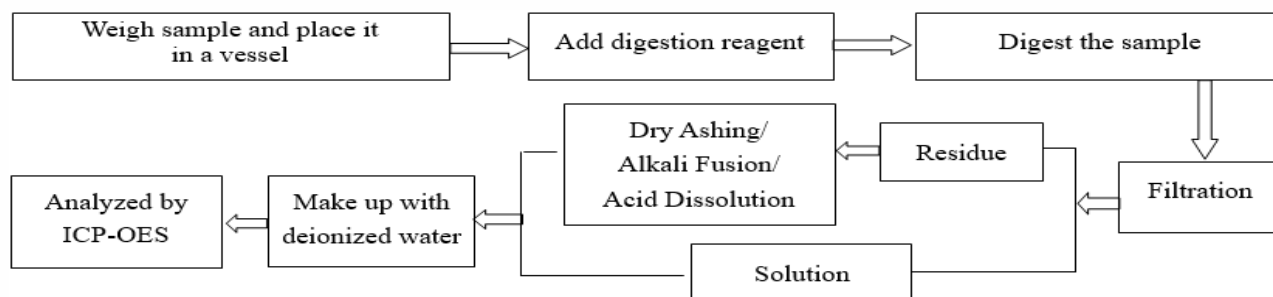
Report No. A2240315771101012

Page 21 of 27

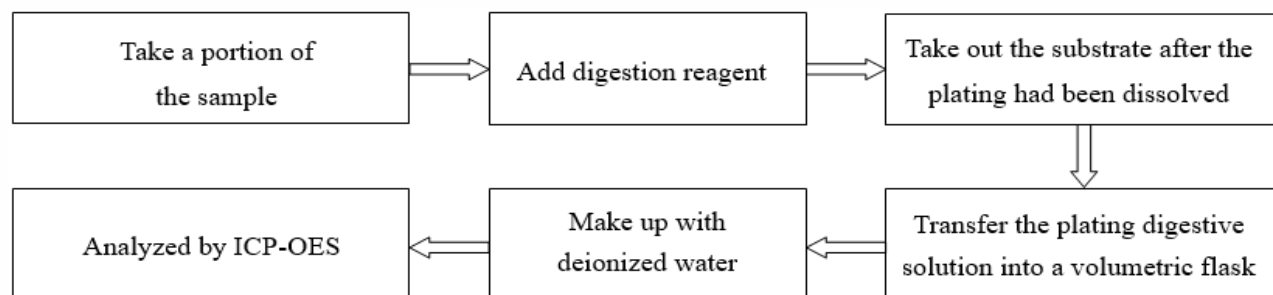
Test Process

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

(1) IEC 62321-5:2013

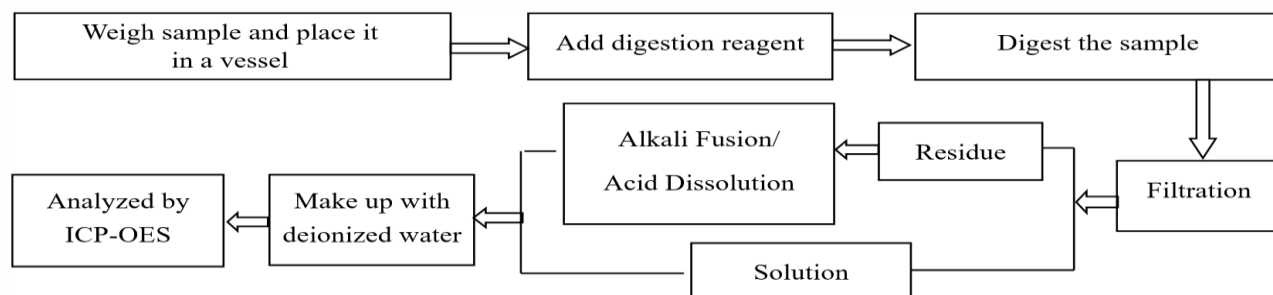


(2) Refer to IEC 62321-5:2013

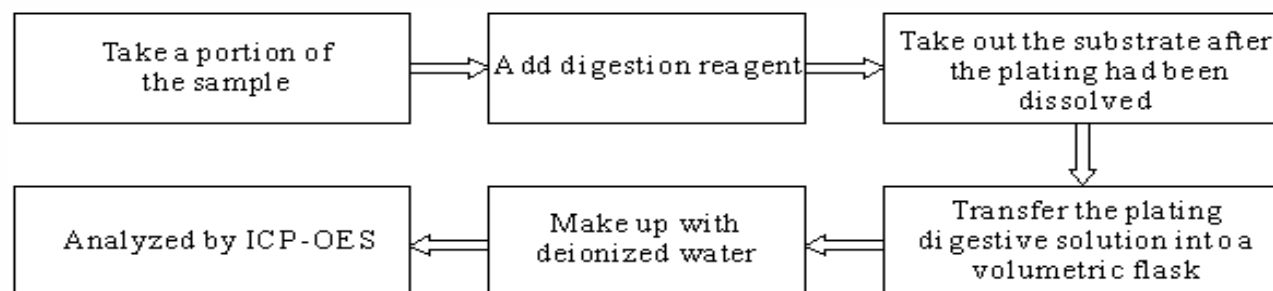


2. Mercury (Hg)

(1) IEC 62321-4:2013+AMD1:2017 CSV



(2) Refer to IEC 62321-4:2013+AMD1:2017 CSV



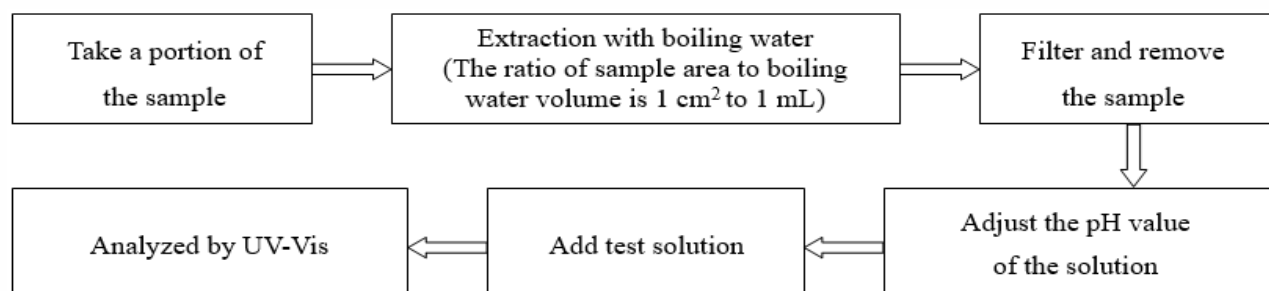
Test Report

Report No. A2240315771101012

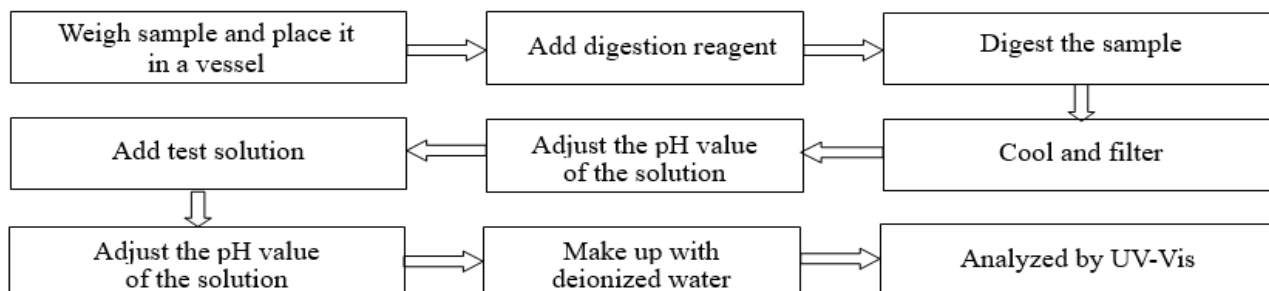
Page 22 of 27

3. Hexavalent Chromium (Cr(VI))

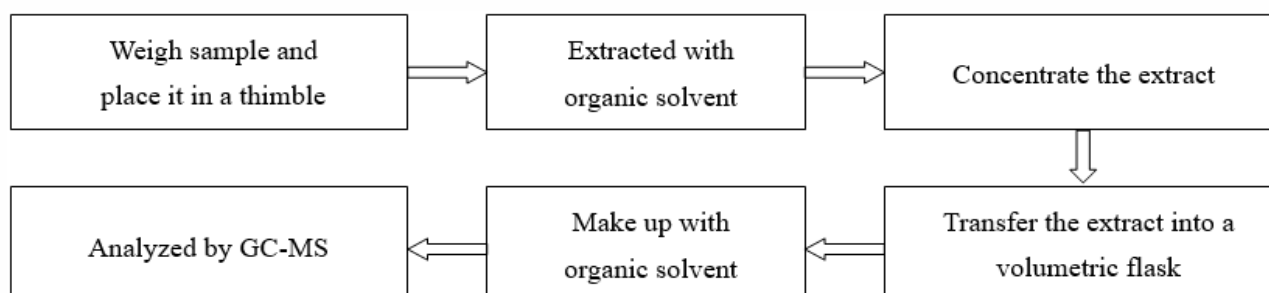
(1) IEC 62321-7-1:2015



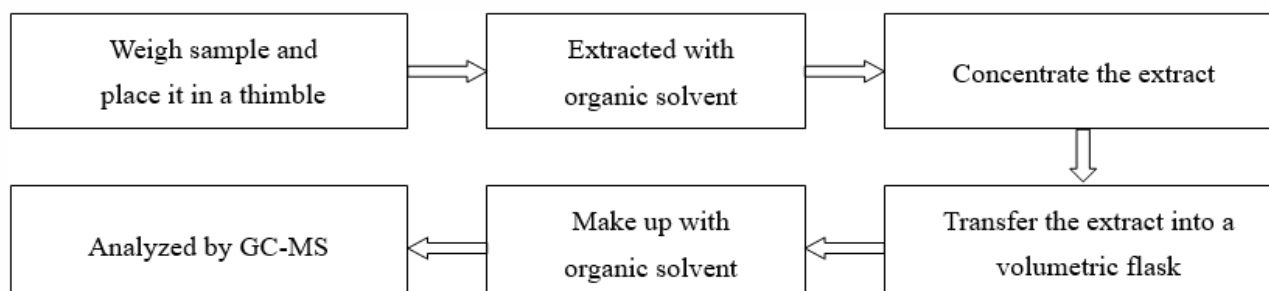
(2) IEC 62321-7-2:2017



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



5. Phthalates



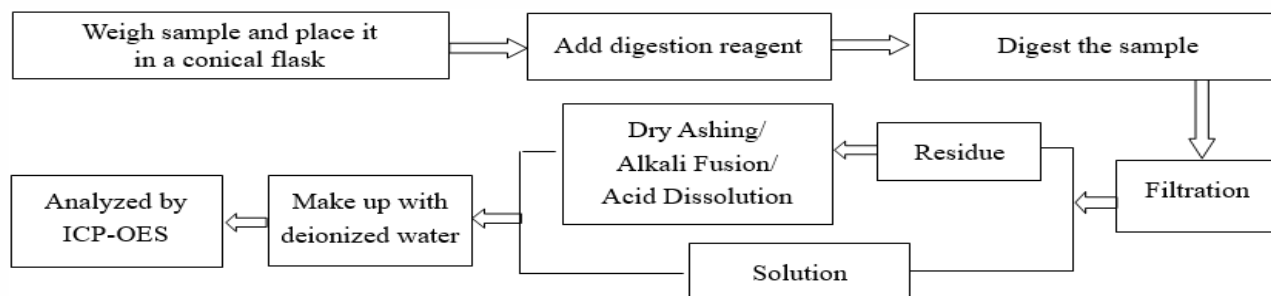
Test Report

Report No. A2240315771101012

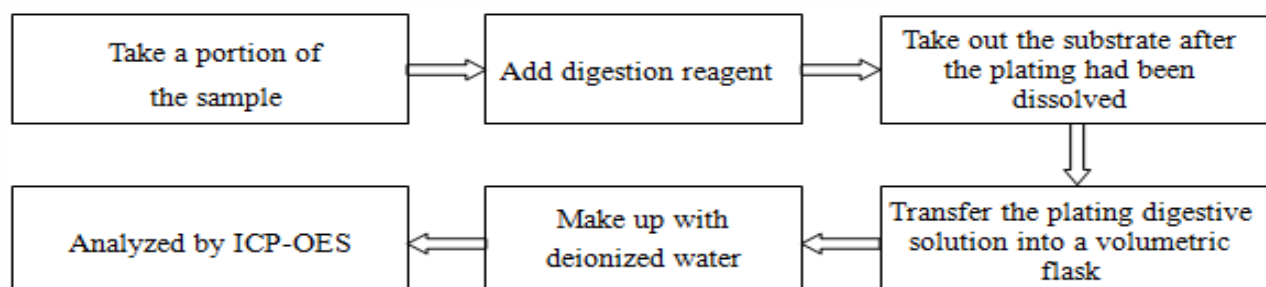
Page 23 of 27

6. Beryllium(Be), Antimony(Sb)

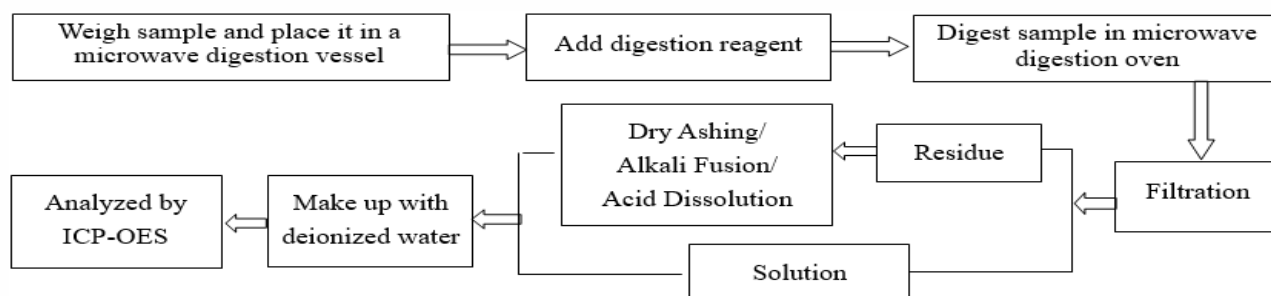
(1) Refer to US EPA 3050B:1996 & US EPA 6010D:2018



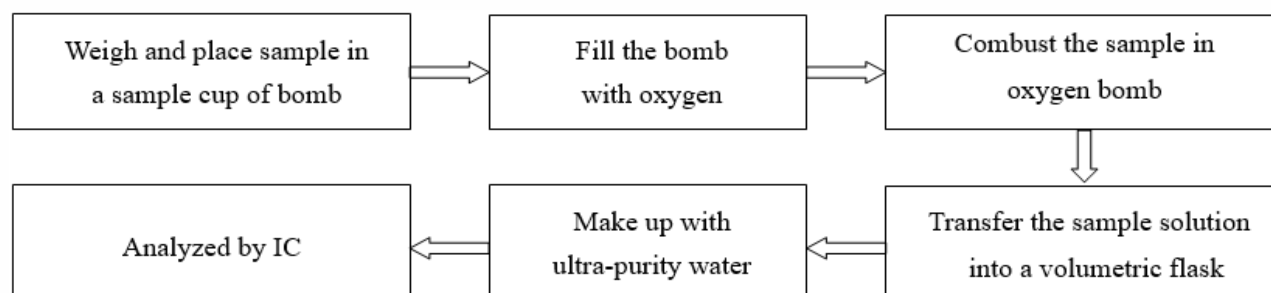
(2) Refer to US EPA 3050B:1996 & US EPA 6010D:2018 (Plating)



(3) Refer to US EPA 3052:1996 & US EPA 6010D:2018



7. Fluorine (F), Chlorine (Cl), Bromine (Br)

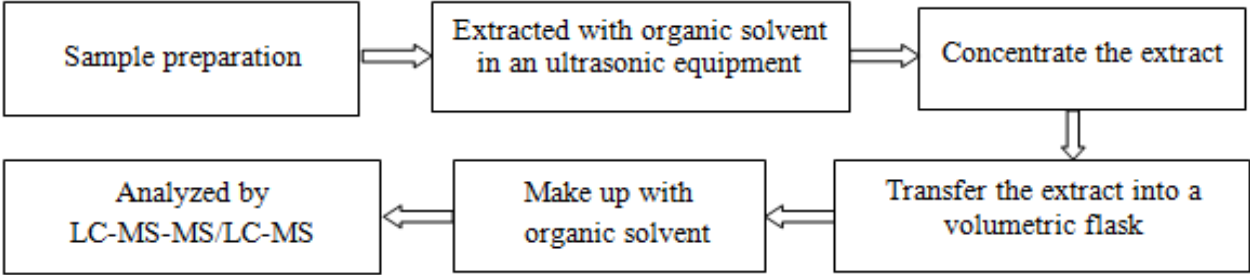


Test Report

Report No. A2240315771101012

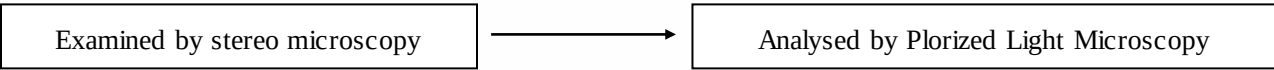
Page 24 of 27

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

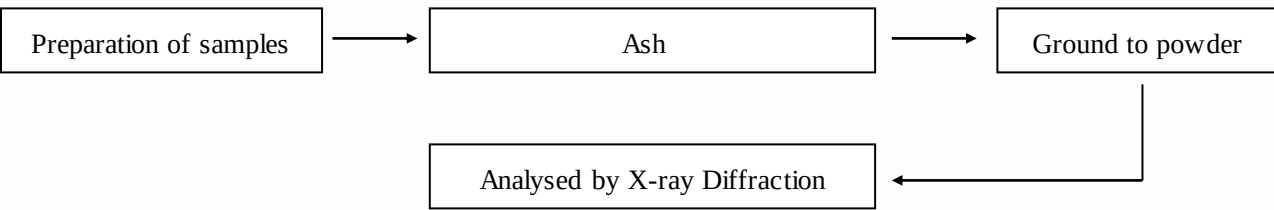


9. Asbestos

PLM



XRD



Test Report

Report No. A2240315771101012

Page 25 of 27

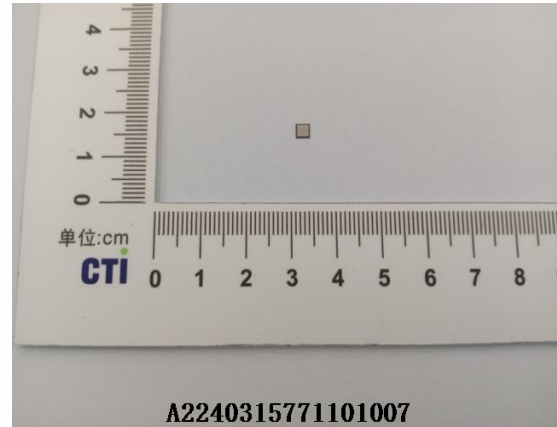
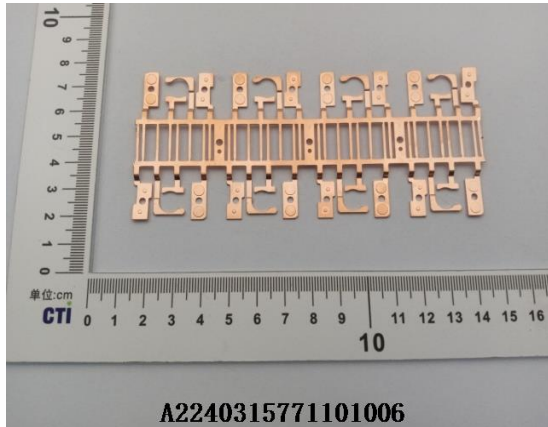
Photo(s) of the sample(s)



Test Report

Report No. A2240315771101012

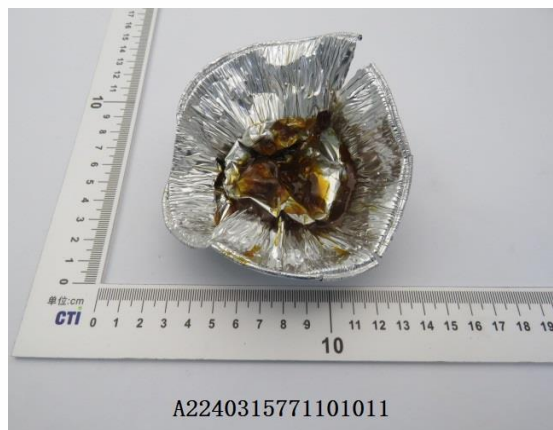
Page 26 of 27



Test Report

Report No. A2240315771101012

Page 27 of 27



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.

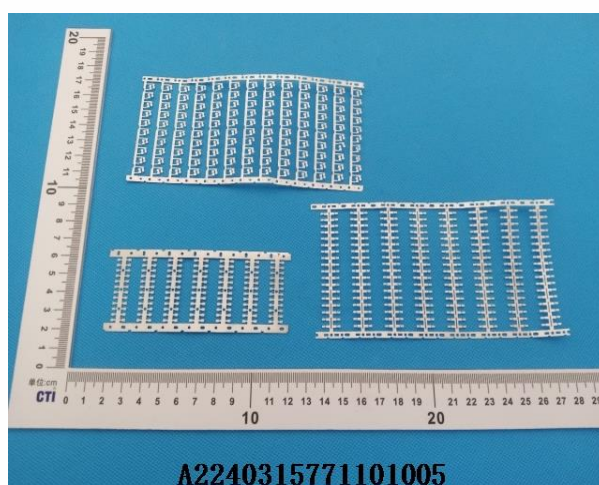
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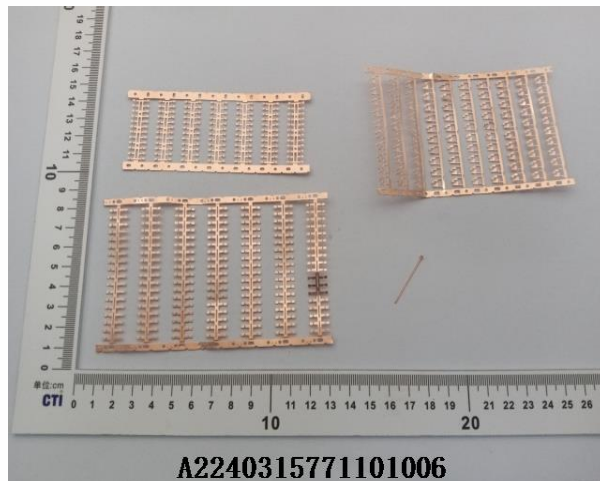
Appendix

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/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/R10000H/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/RS485/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/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/WLCSP-10L/X3DFN2/ULBF

Client Reference Photo (Non-tested sample)





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 A2240315771101012.