

Test Report

Report No. A2230652197101002

Page 1 of 9

Company Name shown on Report BANDL(KUNSHAN)INTERNATIONAL CORPORATIION(TONGLONG WORKSHOP)

Address NO.1698 ZIZHU RODA,KUNSHAN CITY

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

Sample Name MATT TIN PLATING
Sample Received Date Dec. 11, 2023
Testing Period Dec. 11, 2023 to Dec. 16, 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), Arsenic(As), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS), Polychlorinated Biphenyls(PCBs) in the submitted sample(s).

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

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

Conclusion

Tested Sample	According to standard/directive	Result
Submitted Sample	RoHS Directive 2011/65/EU with amendment (EU) 2015/863	PASS

PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.



Approved by

Chen Kaimin

Chen kaimin
Lab Manager

Date

Dec. 16, 2023

No. R188381905

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

No.1351, Wanfang Road, Minhang District, Shanghai, China

Test Report

Report No. A2230652197101002

Page 2 of 9

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	Refer to IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	Refer to IEC 62321-5:2013	ICP-OES
Mercury (Hg)	Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	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
Arsenic(As)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
Beryllium(Be)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
Antimony(Sb)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
Fluorine (F)	Refer to EN 14582:2016	IC
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Iodine (I)	Refer to EN 14582:2016	IC
Perfluorooctanoic Acid(PFOA)	CEN/TS 15968:2010	LC-MS-MS/LC-MS
Perfluorooctane Sulfonates(PFOS)	CEN/TS 15968:2010	LC-MS-MS/LC-MS
Polychlorinated Biphenyls(PCBs)	Refer to US EPA 3550C:2007 & US EPA 8270E:2018	GC-MS



Test Report

Report No. A2230652197101002

Page 3 of 9

Test Result(s)

Tested Item(s)	Result	MDL	Limit
	002		
Lead (Pb)	50 mg/kg	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 µg/cm ² (LOQ)	1000 mg/kg
Tested Item(s)	Result	MDL	Limit
	002		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	5 mg/kg	1000 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	Limit
	002		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 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 Report

Report No. A2230652197101002

Page 4 of 9

Test Result(s)

Tested Item(s)	Result	MDL	Limit
	002		
Phthalates (DBP, BBP, DEHP, DIBP)			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg
Tested Item(s)	Result	MDL	
	002		
Arsenic (As)	N.D.	10 mg/kg	
Beryllium (Be)	N.D.	10 mg/kg	
Antimony (Sb)	N.D.	10 mg/kg	
Tested Item(s)	Result	MDL	
	002		
Fluorine (F)	N.D.	1 µg/cm ²	
Chlorine (Cl)	N.D.	1 µg/cm ²	
Bromine (Br)	N.D.	1 µg/cm ²	
Iodine (I)	N.D.	1 µg/cm ²	
Tested Item(s)	Result	MDL	
	002		
Perfluorooctanoic Acid (PFOA)	N.D.	0.5 µg/m ²	
Tested Item(s)	Result	MDL	
	002		
Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 µg/m ²	

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Test Report

Report No. A2230652197101002

Page 5 of 9

Test Result(s)

Tested Item(s)	Result	MDL
	002	
Polychlorinated Biphenyls(PCBs)		
Monochlorobiphenyl	N.D.	5 mg/kg
Dichlorobiphenyl	N.D.	5 mg/kg
Trichlorobiphenyl	N.D.	5 mg/kg
Tetrachlorobiphenyl	N.D.	5 mg/kg
Pentachlorobiphenyl	N.D.	5 mg/kg
Hexachlorobiphenyl	N.D.	5 mg/kg
Heptachlorobiphenyl	N.D.	5 mg/kg
Octachlorobiphenyl	N.D.	5 mg/kg
Nonachlorobiphenyl	N.D.	5 mg/kg
Decachlorobiphenyl	N.D.	5 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	002	Silvery plating

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

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-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.

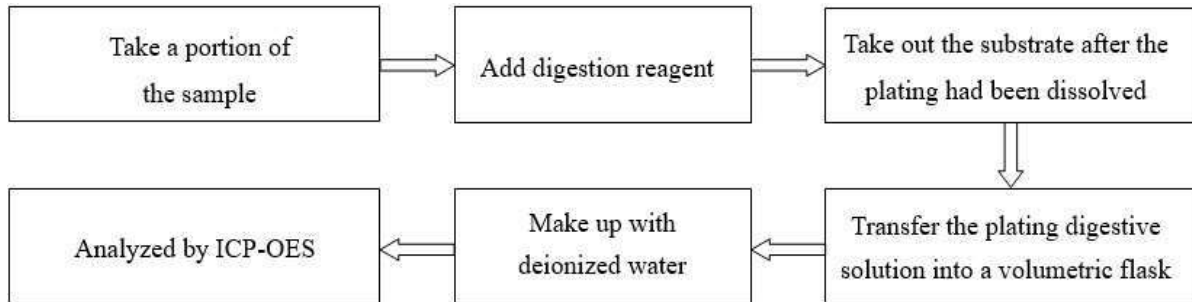
Test Report

Report No. A2230652197101002

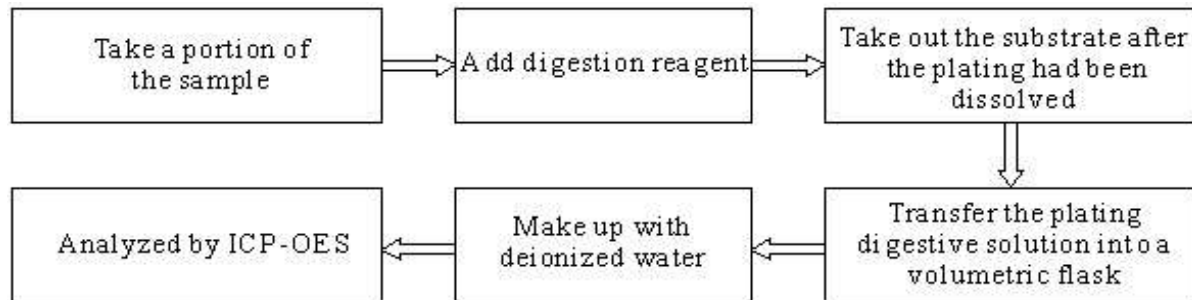
Page 6 of 9

Test Process

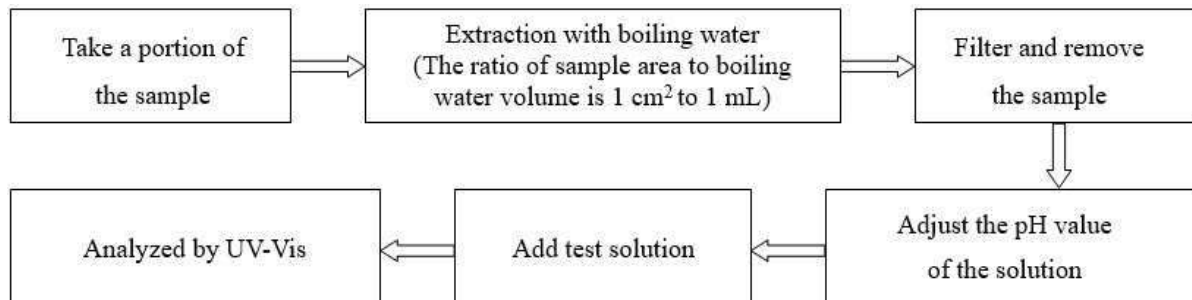
1. Lead (Pb), Cadmium (Cd)



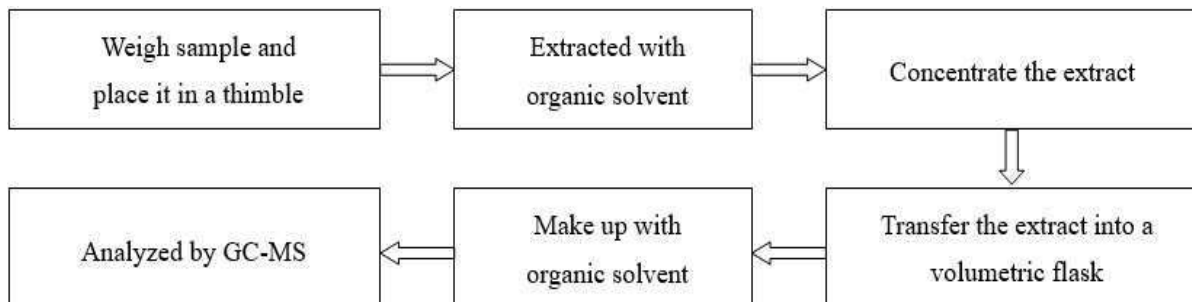
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

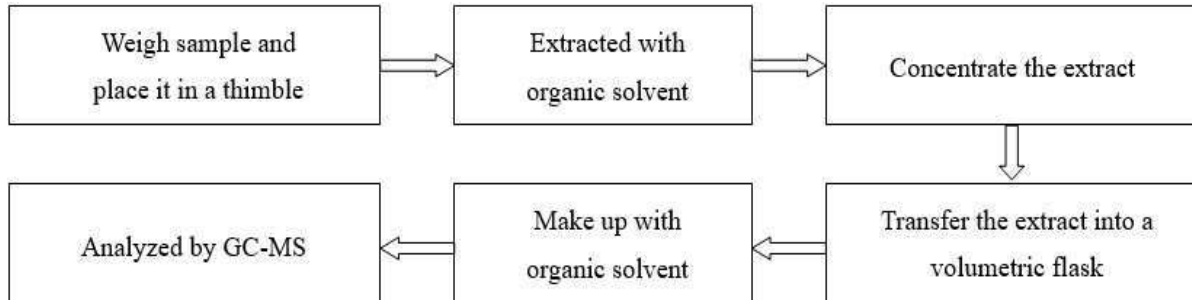


Test Report

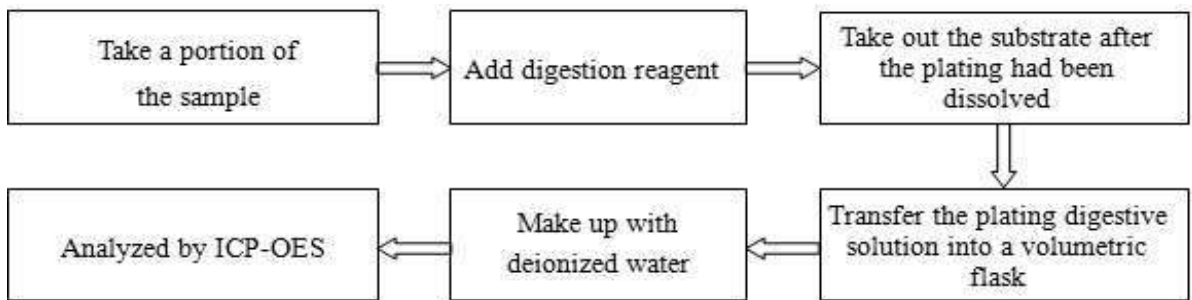
Report No. A2230652197101002

Page 7 of 9

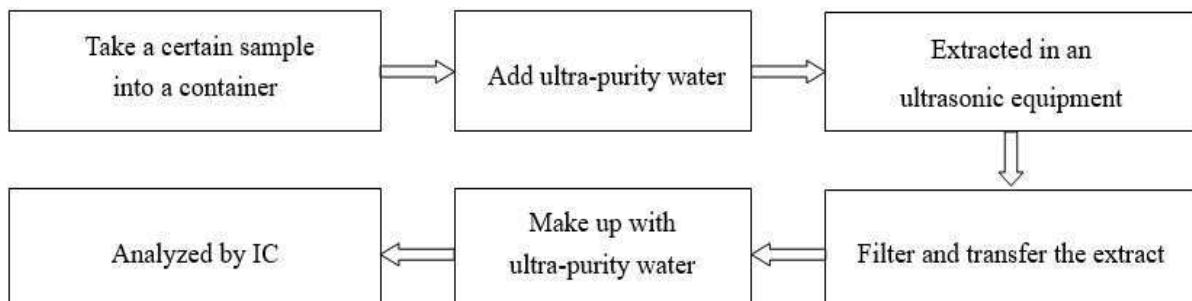
5. Phthalates (DBP, BBP, DEHP, DIBP)



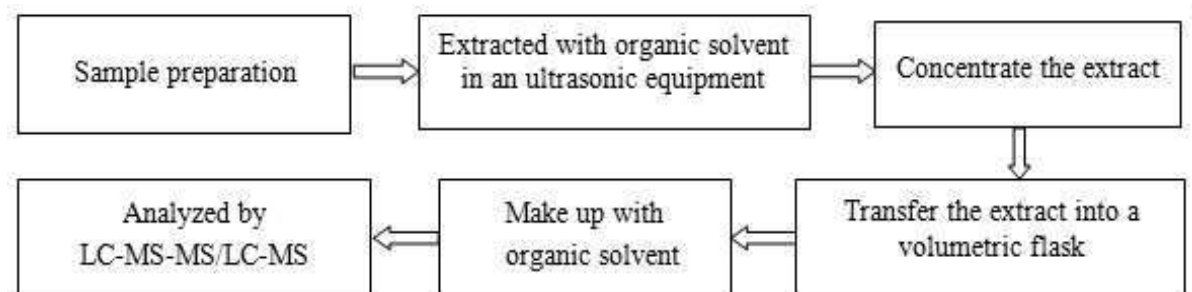
6. Arsenic(As), Beryllium(Be), Antimony(Sb)



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



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



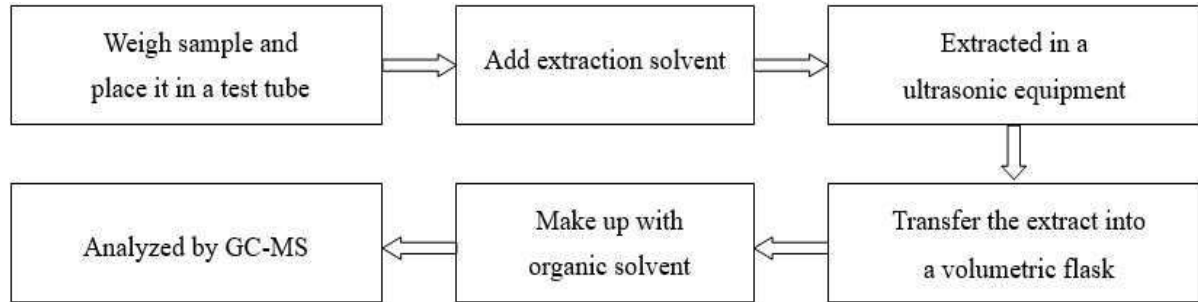
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Test Report

Report No. A2230652197101002

Page 8 of 9

9. Polychlorinated Biphenyls(PCBs)

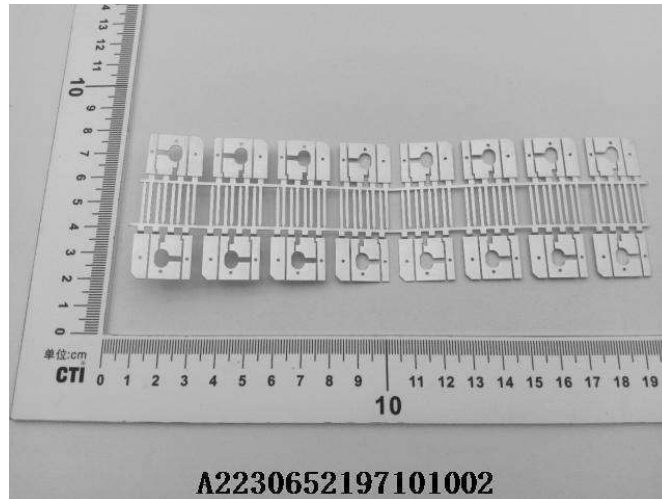


Test Report

Report No. A2230652197101002

Page 9 of 9

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 ***