Test Report

Report No. A223022832410102 Page 1 of 10

Company Name shown on Report SUNTAN TECHNOLOGY COMPANY LIMITED

Address UNIT H, 4/F., DORMIND INDUSTRIAL BUILDING, 13 YIP FUNG STREET, FANLING, N.T. , HONG KONG.

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)
001	Chip MLCC Multilayer Ceramic Capacitors
002	Axial & Radial Multilayer Ceramic Capacitors
003	Color Ring Capacitors
004	Axial & Radial Monolithic Ceramic Capacitors
005	Axial & Radial Multilayer Ceramic Capacitors

Sample Received Date May 18, 2023

Testing Period May 18, 2023 to May 23, 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/Test Result(s) Please refer to the following page(s).

Approved by: Hill Zheng Date May 23, 2023

Hill Zheng
Technical Manager

No. R294343644

Test Report

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 62321-7-1:2015	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

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Test Result(s)

Tested Item(s)	Result			MDL
	001	002	003	
Lead (Pb)	N.D.	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))	N.D.	N.D.	N.D.	8 mg/kg
	--	--	--	0.10 μg/cm ²(LOQ)

Tested Item(s)	Result		MDL
	004	005	
Lead (Pb)	N.D.	N.D.	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	002	003	
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

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Tested Item(s)	Result	MDL
	004	
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
	001	002	003	
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

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Tested Item(s)	Result	MDL
	004	
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	002	003	
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
	004	
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

Test Report

Sample/Part Description

No.	CTI Sample ID	Description
1	001	Chip capacitor(Tested as a whole)*
2	002	Mixed test, brown yellow body with brown printing*[1]
3	003	Brown yellow body with multicolor ink(Tested as a whole)*
4	004	Brown yellow body with brown printing(Tested as a whole)*
5	005	Mixed test. metal pin with silvery plating*[1]

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.

-*[1]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 or LOQ)

-mg/kg = ppm = parts per million

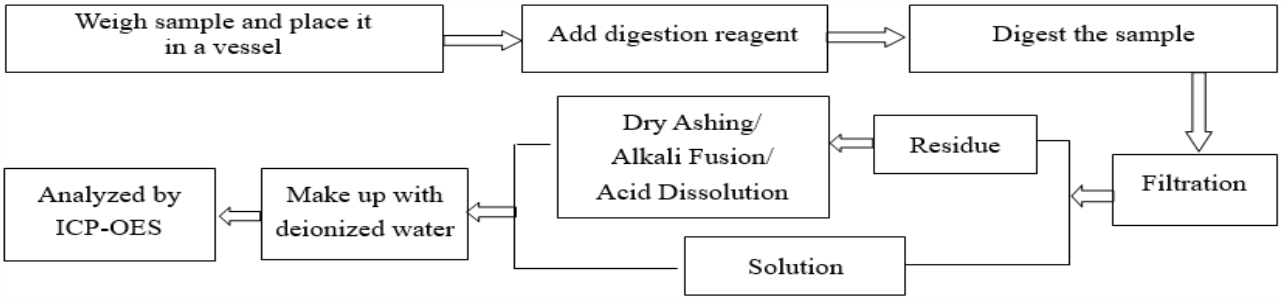
-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm^2

-▼The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm^2. The coating is considered a non-Cr(VI) based coating.

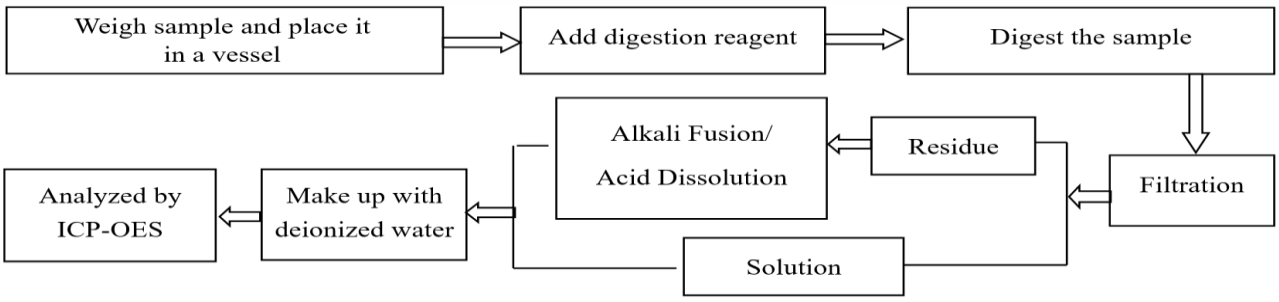
-According to the client's statement for company relations, the test result(s) of this report is/are presented in reference to the result(s) that reported in A2230228324101.

Test Process

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

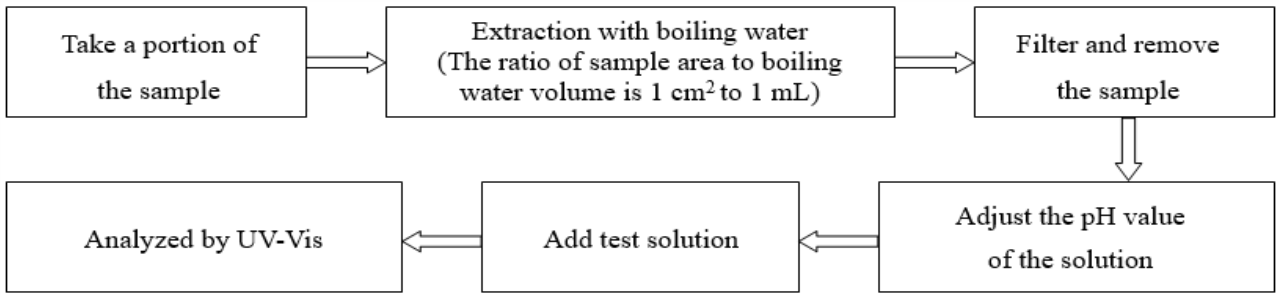


2. Mercury (Hg)

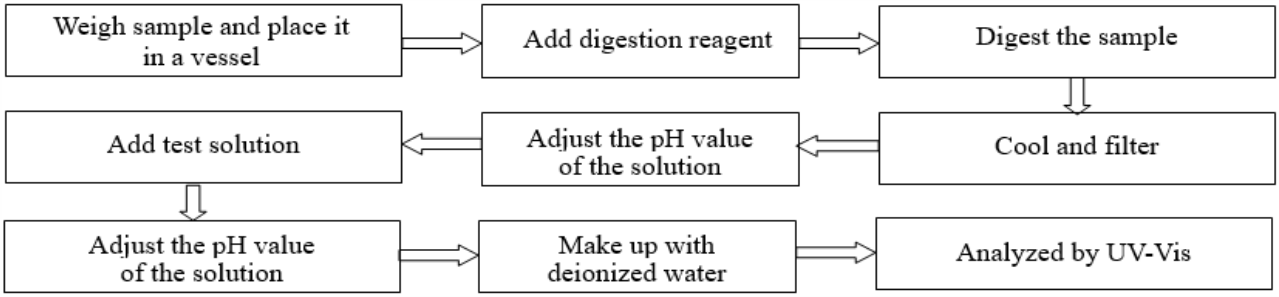


3. Hexavalent Chromium (Cr(VI))

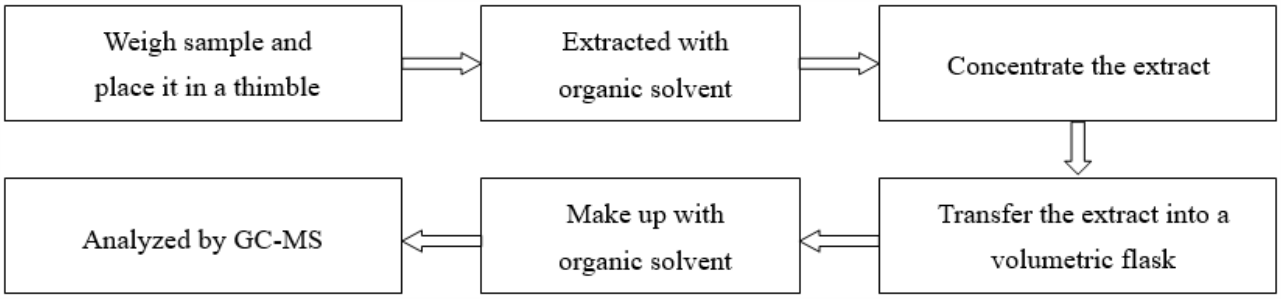
(1) IEC 62321-7-1:2015



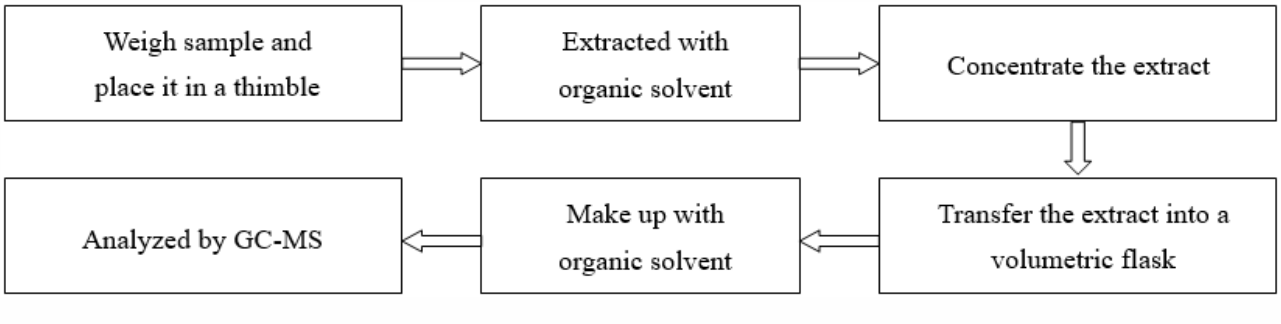
(2) IEC 62321-7-2:2017



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



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



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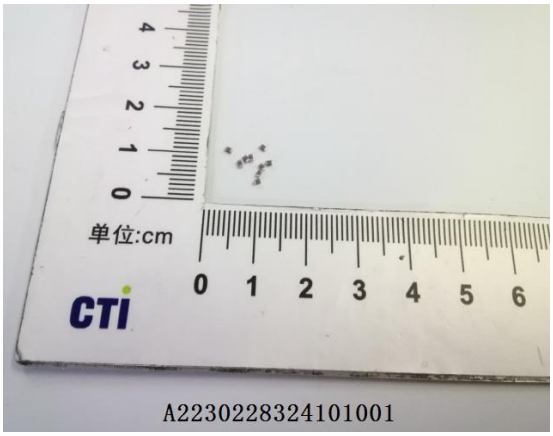
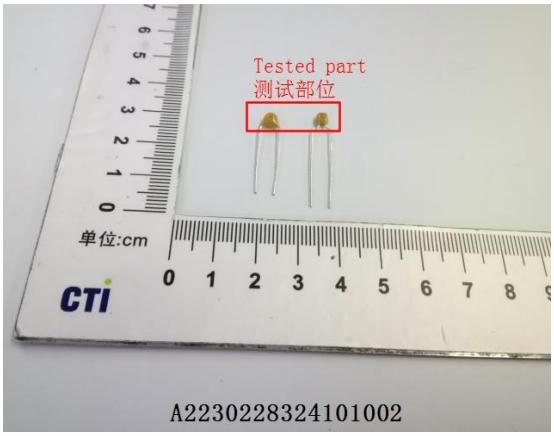
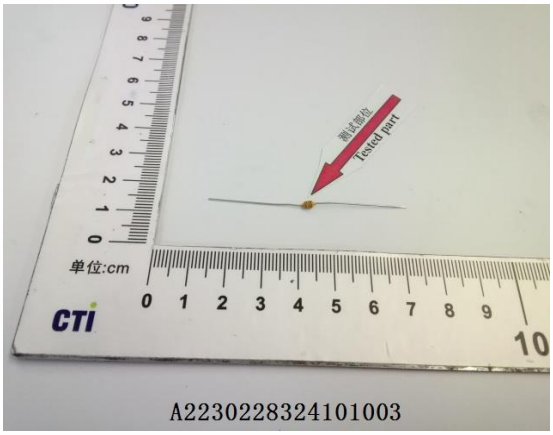
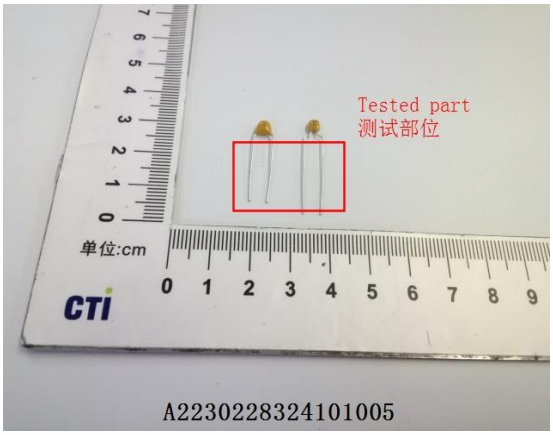
Photo(s) of the sample(s)









Test Report

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 ***