

Test Report

No.: SHAPH24002876805

Date: Feb 28, 2024

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Client Name: WUXI NANDA ELECTRONICS SOLDER FACTORY(CO.,LTD)

Client Address: EAST DINGXIANG ROAD18, HUDAI INDUSTRIAL PARK,BINHU DISTRICT,WUXI CITY,JINAGSU P.R.CHINA

Sample Name: Pb95.5Sn2Ag2.5

Other: Φ 0.3mm/ Φ 0.4mm/0.5mm/0.7mm/0.75mm/0.76mm/1.0mm12/18/20/25/30mil

The above sample(s) and information were provided by the client.

SGS Job No.: SUZIN2402000320PL03

Sample Receiving Date: Feb 20, 2024

Testing Period: Feb 20, 2024 ~ Feb 28, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Mei Shen

Mei Shen
Approved Signatory

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	003	SHA24-0028768-0001.C003	Silver metal parts

Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) “-“ = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to Titration method, IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES, UV-Vis, GC-MS and Hg analyzer.

Test Item(s)	Limit	Unit(s)	MDL	003
Cadmium (Cd)	100	mg/kg	2	ND
Lead(Pb)	0.1	%	-	95.6 [▲]
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI)) [▼]	-	µg/cm ²	0.10	ND
Polybromobiphenyl (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND



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Test Item(s)	Limit	Unit(s)	MDL	003
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl phthalate (DIBP)	1000	mg/kg	50	ND

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
- (3) ▼ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI.
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating.
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.

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.

- (4) ▲ According to the declaration from the client, Lead (Pb) in No.003 is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 7(a)]: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

More information about exemption can be found via the following link:

<https://rohs.sgsonline.com.cn/PDFLinks/en/RSTS-TP-037%20RoHS%20Exemption%20%28EN%29.pdf>

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.



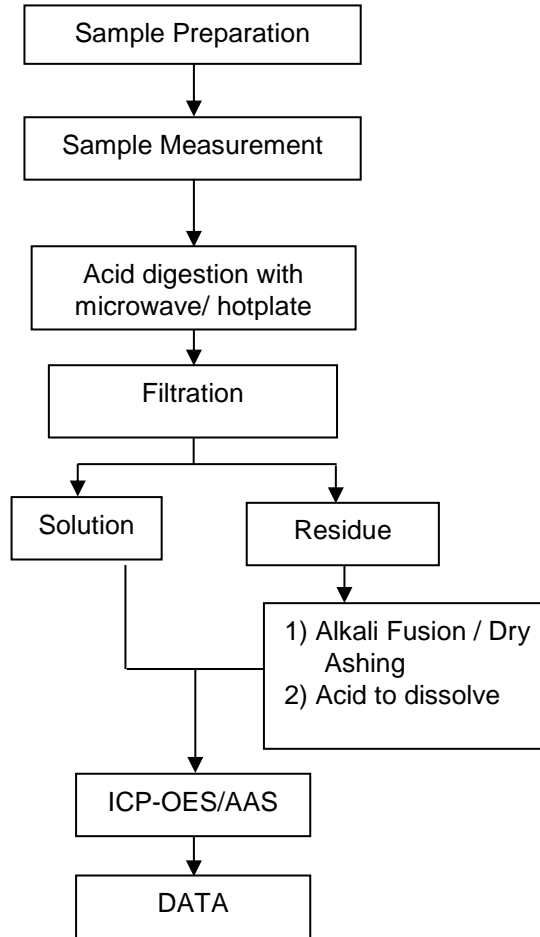
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Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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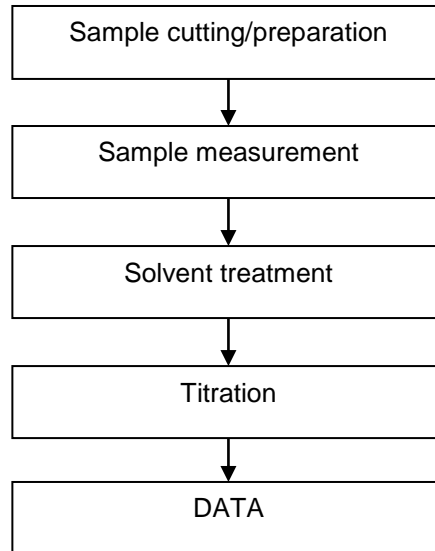
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Titration Testing Flow Chart



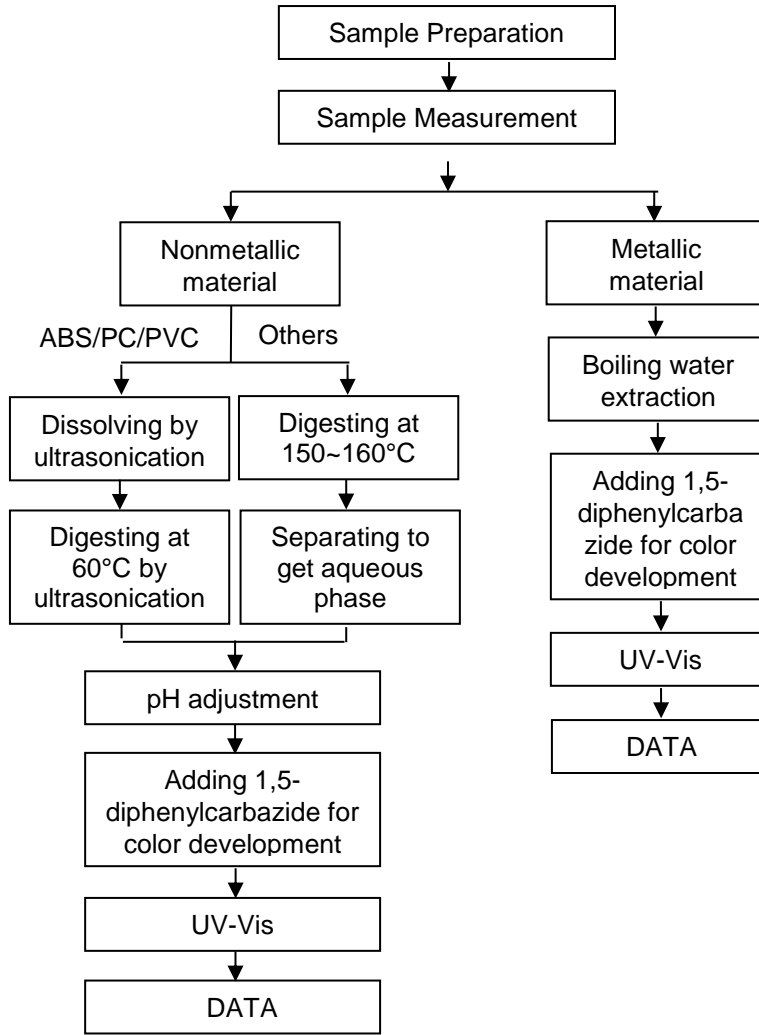
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Hexavalent Chromium (Cr(VI)) Testing Flow Chart

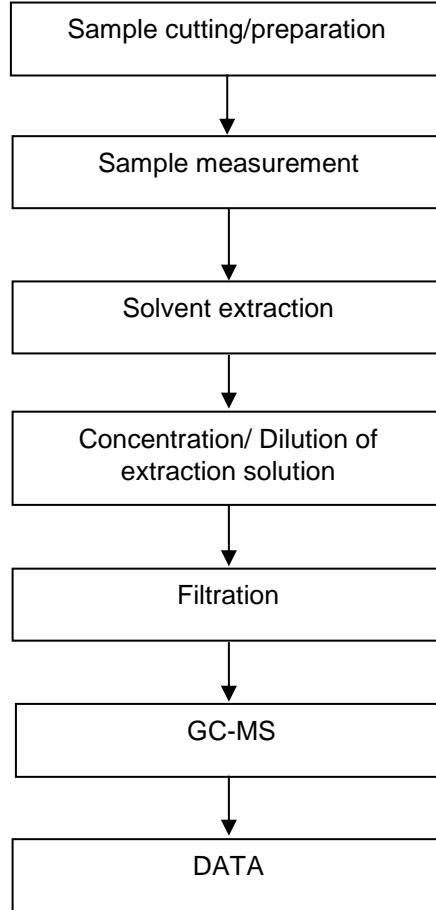


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PBB/PBDE Testing Flow Chart



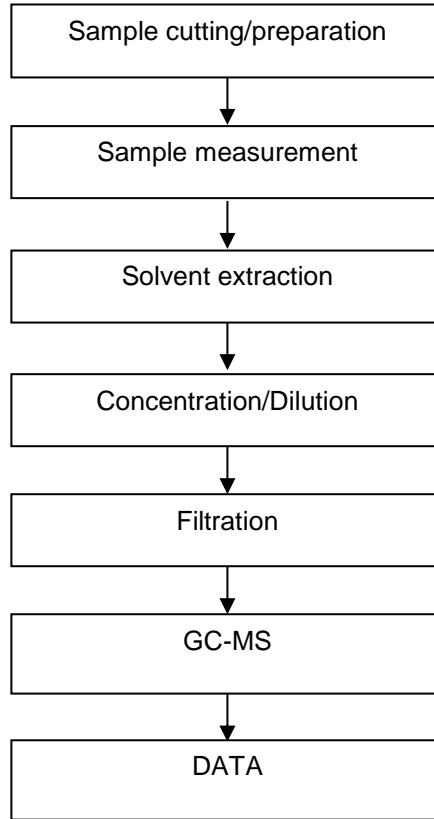
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Phthalates Testing Flow Chart



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Sample Photo:



SHA24-0028768-0001.C003

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