



Test Report

No.: GZ1103023148/CHEM

Date: MAR 09, 2011

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WUXI LIHONG ELECTRONIC MATERIALS CO., LTD
NO.19 JINGUI ROAD, NORTH DISTRICT, HUDAI INDUSTRIAL PARK, WUXI CITY.

The following sample(s) was/were submitted and identified on behalf of the applicant as Solder for semiconductors

SGS Job No. : GZ12976557EC,SHA11-02338701

SGS Internal Reference No. : 6.1

Tested sample information : Pb92.5-Sn5-Ag2.5 Φ 0.5

Client Reference Information : Pb92.5-Sn5-Ag2.5 Φ 0.76

Date of Sample Received : FEB 22, 2011

Testing Period : FEB 22, 2011 TO MAR 01, 2011

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

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

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

Conclusion : A: Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Ltd.

Manson Yang
Approved Signatory

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Test Results:

Description for specimen 1 : Silvery metal wire

A: RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	100
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	-	IEC 62321: 2008, UV-Vis	Negative	◇	#
Sum of PBBs	mg/kg	-	N.D.	-	1000
Monobromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Dibromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tribromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tetrabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Pentabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Hexabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Heptabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Octabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Nonabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Decabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Sum of PBDEs	mg/kg	-	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Dibromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tribromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tetrabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Pentabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Hexabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Heptabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Octabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Nonabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Decabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	

Lead.

Test Method : Titration method.

Test Item(s).	Unit.	MDL.	001.
Lead (Pb).	%.	-	92.46 ^[1]

Note:

- 1 mg/kg = 1 ppm = 0.0001%.
- N.D. = Not Detected (< MDL)
- MDL = Method Detection Limit
- ◇ = Spot test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;

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(The tested sample should be further verified by boiling water extraction method if the spot test result is negative or cannot be confirmed.)

Boiling water extraction:

Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling water extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

5. # = Positive indicates the presence of CrVI on the tested area.

Negative indicates the absence of CrVI on the tested area.

6. "-" = Not regulated

B: PFOA & PFOS (Perfluorooctanoic acid & Perfluorooctane sulfonates)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Perfluorooctanoic acid (PFOA)	mg/kg	EPA 3550C: 2007, LC-MS	N.D.	10
Perfluorooctane sulfonates (PFOS)			N.D.	
PFOS – Acid	mg/kg	EPA 3550C: 2007, LC-MS		10
PFOS – Metal Salt				
PFOS – Amide				

Note:

1. mg/kg = ppm

2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit

For reference: Entry 53 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2006/122/EC):

(1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0,005 % by mass.

(2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0,1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1 µg /m² of the coated material.

C: Halogen

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Fluorine (F)	mg/kg	BS EN 14582:2007, IC	N.D.	50
Chlorine (Cl)	mg/kg	BS EN 14582:2007, IC	N.D.	50
Bromine (Br)	mg/kg	BS EN 14582:2007, IC	N.D.	50
Iodine (I)	mg/kg	BS EN 14582:2007, IC	N.D.	50

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Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

Remark[1]: According to the declaration from client, specimen is high melting temperature type solder, while Lead in high melting temperature type solders is exempted by RoHS regulatory (Directive 2002/95/EC of the European Parliament and of the council of 27 January 2003).

Remark[2]: Results shown of Lead part were conducted by SGS SH LTD.

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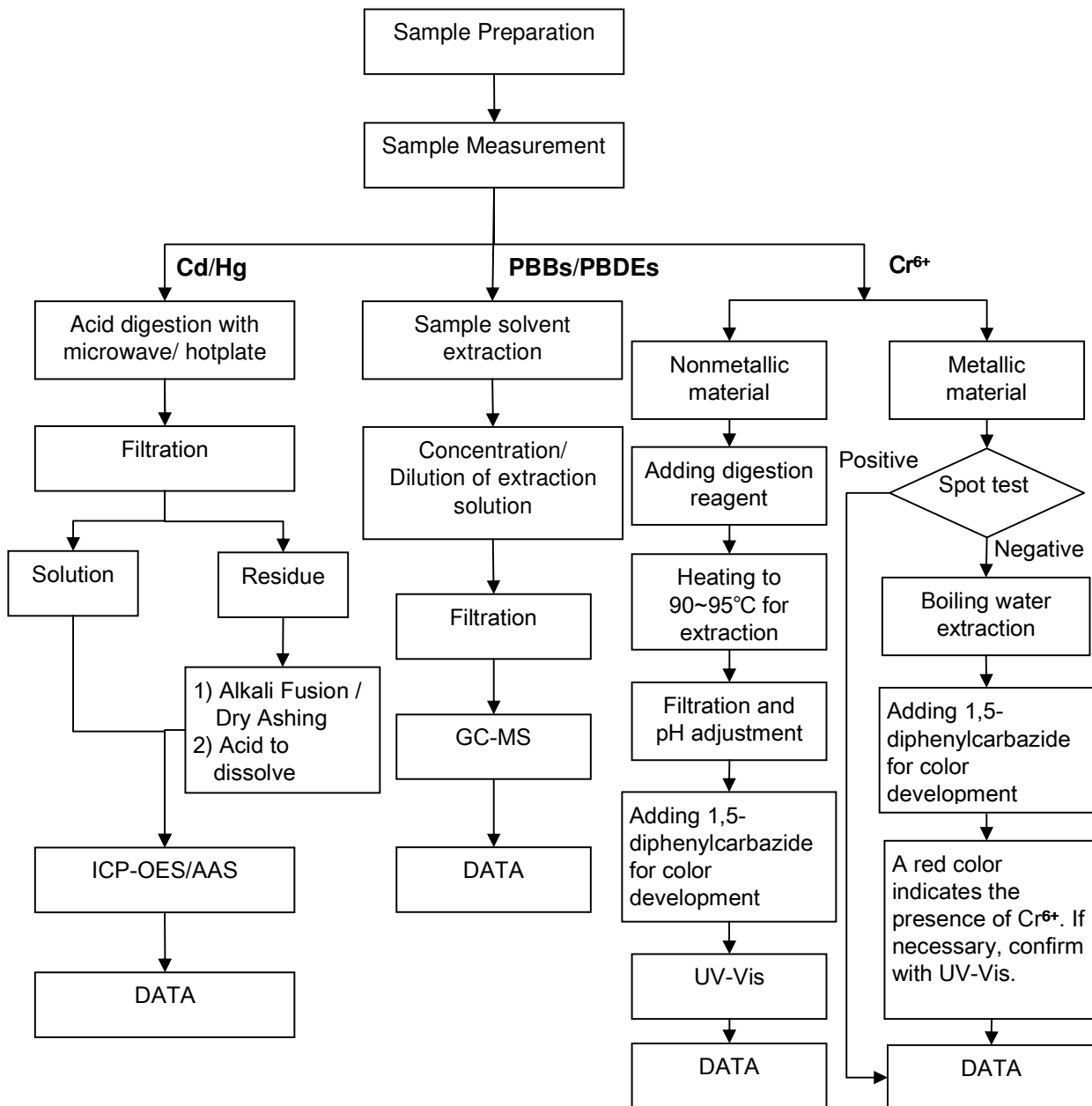
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu / Ross Zhan
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr6+ and PBBs/PBDEs test method excluded).

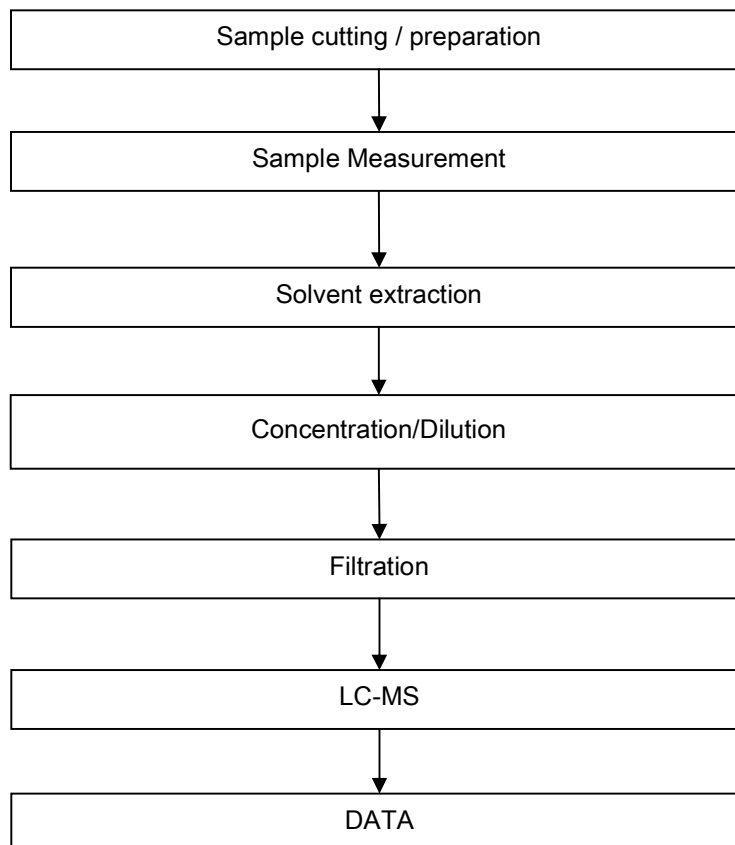


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ATTACHMENTS

PFOA / PFOS Testing Flow Chart

- 1) Name of the person who made testing: Cindy Huang
- 2) Name of the person in charge of testing: Ryan Yang

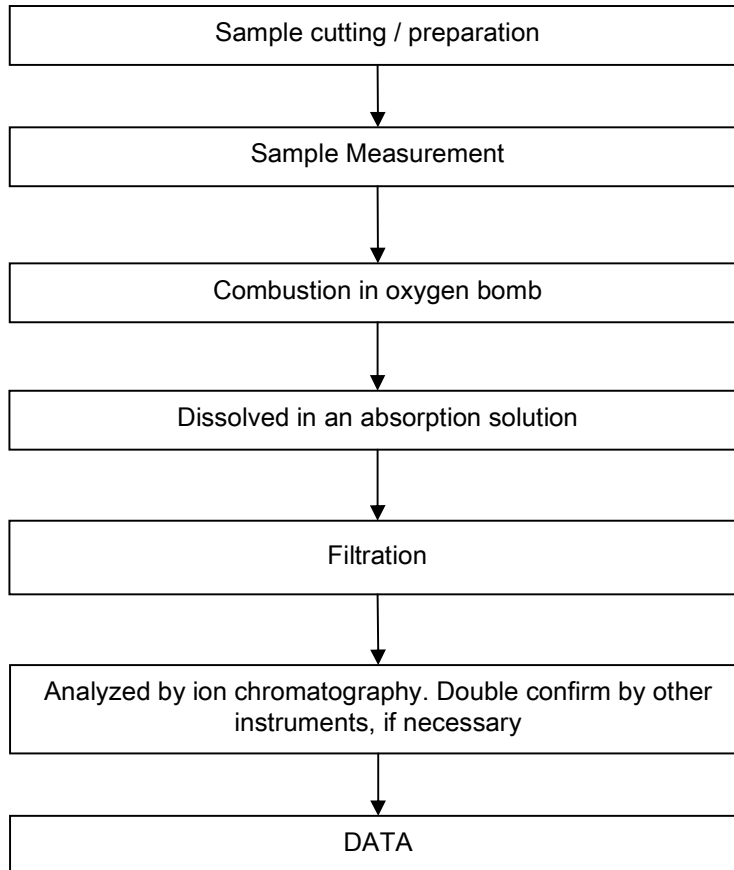


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Halogen Testing Flow Chart

- 1) Name of the person who made testing: Liang Wang
- 2) Name of the person in charge of testing: Michelle Song



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Sample photo :



SGS authenticate the photo on original report only

*** End of Report ***

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