



Reference: ICP Analysis Note
Date of Issue: 03 December 2008

TSOT23-5/SOT23-5/MLP/SC70 ICP Analysis Note

The appended ICP Analysis reports demonstrate compliance with EC directives 2002/95/EC (Restriction of the use of certain hazardous substances "RoHS") and the 24th amendment to 76/769/EEC (Restrictions on the marketing and use of certain dangerous substances and preparations).

This analysis was performed to independently verify that the content of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PDBE) present is within the permitted levels set.

Note: This report is a composite of the reports for the individual, homogenous parts of the product. The table below is a summary of the data in the following pages.

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K.Clithero
Group Quality Manager

RoHS Substance	Result (ppm)
Lead	40
Mercury	Not detected
Cadmium	Not detected
Hexavalent Chromium	Not detected
Polybrominated Biphenyls (PBB)	Not detected
Polybrominated Diphenyl Ethers (PDBE)	Not detected

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Test Report

No. : CE/2008/49068 Date : 2008/05/08 Page : 1 of 4

ZETEX SEMICONDUCTORS PLC
ZETEX TECHNOLOGY PARK, CHADDERTON, OLDHAM. OL9 9LL. UNITED
KINGDOM



The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description : WAFER
Buyer/Order No. : 65637
Sample Receiving Date : 2008/04/30
Testing Period : 2008/04/30 TO 2008/05/08

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

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

Test Report

No. : CE/2008/49068 Date : 2008/05/08 Page : 2 of 4

ZETEX SEMICONDUCTORS PLC
 ZETEX TECHNOLOGY PARK, CHADDERTON, OLDHAM. OL9 9LL. UNITED
 KINGDOM



Test Result(s)

PART NAME NO.1 : WAFER

Test Item (s):	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	n.d.
Antimony (Sb)	mg/kg	With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Bromine content.	50	n.d.

Test Report

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ZETEX SEMICONDUCTORS PLC
 ZETEX TECHNOLOGY PARK, CHADDERTON, OLDHAM. OL9 9LL. UNITED
 KINGDOM



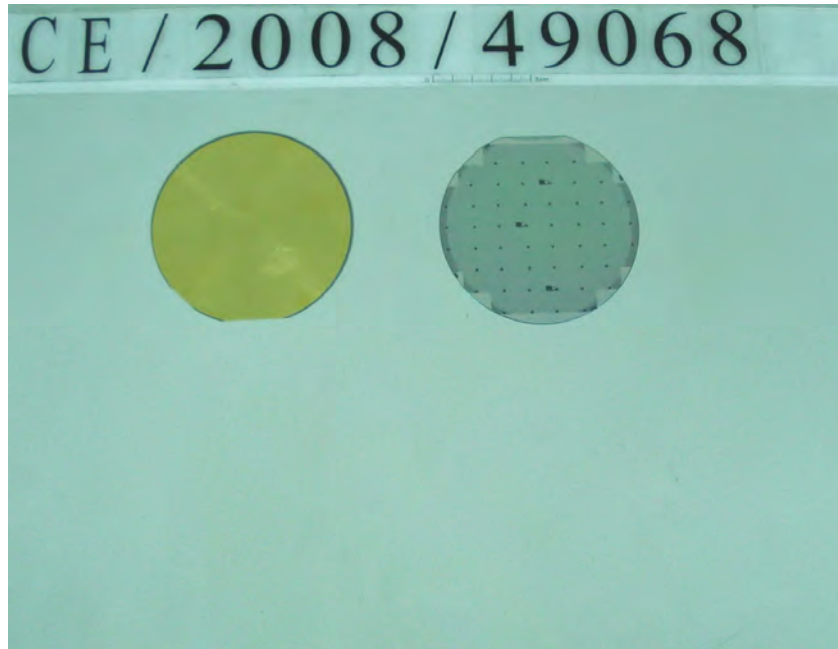
Test Item (s):	Unit	Method	MDL	Result
				No.1
Sum of PBBs	mg/kg	With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs (Mono to Nona) (Note 4)			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.
Sum of PBDEs (Mono to Deca)			-	n.d.

- Note :
1. mg/kg = ppm
 2. n.d. = Not Detected
 3. MDL = Method Detection Limit
 4. According to 2005/717/EC DecaBDE is exempt.
 5. " - " = Not Regulated

Test Report

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ZETEX SEMICONDUCTORS PLC
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KINGDOM



** End of Report **



Test Report

No. LPCI/24550/07

Date : 2008/01/31

Page: 1 of 4

CTS Ref. CTS/07/6043/Dynacraft

DYNACRAFT INDUSTRIES SDN. BHD.
255-A, BLOCK D, PHASE II, BAYAN LEPAS INDUSTRIAL ZONE,
11900 PENANG, MALAYSIA.

The following merchandise was (were) submitted and identified by the client as:

Sample Description : Spot Ag lead frame using raw copper blank C194
Sample Receiving Date : 2007/12/19
Testing Period : 2007/12/19 to 2007/12/27
Date Reported : 2008/01/31

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : (1) With reference to IEC 62321 for Cadmium Content.
Analysis was performed by ICP
(2) With reference to IEC 62321 for Lead Content.
Analysis was performed by ICP
(3) With reference to IEC 62321 for Mercury Content.
Analysis was performed by ICP
(4) With reference to ISO 3613 for Hexavalent Chromium.
Analysis was performed by UV/Vis Spectrophotometry.
(5) With reference to IEC 62321, Ed1 (111 54 CDV). Determination of PBBs and PBDEs by GC/MS.

Test Results : Please refer to next page.

Analysts : Lim Meng Hoe & Jocelyn Christmas

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CHONG KIEN LEN
B.Sc.(HONS) AMIC
LAB MANAGER

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Test Report

No. LPCI/24550/07

Date : 2008/01/31

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CTS Ref. CTS/07/6043/Dynacraft


Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	Result	MDL
Cadmium(Cd)	(1)	N.D.	2
Lead (Pb)	(2)	30	2
Mercury (Hg)	(3)	N.D.	2
Hexavalent Chromium (CrVI)	(4)	N.D.	2
Sum of Polybrominated Biphenyl (PBBs)	(5)	N.D.	-
Monobromobiphenyl		N.D.	5
Dibromobiphenyl		N.D.	5
Tribromobiphenyl		N.D.	5
Tetrabromobiphenyl		N.D.	5
Pentabromobiphenyl		N.D.	5
Hexabromobiphenyl		N.D.	5
Heptabromobiphenyl		N.D.	5
Octabromobiphenyl		N.D.	5
Nonabromobiphenyl		N.D.	5
Decabromobiphenyl		N.D.	5
Sum of Polybrominated Diphenylethers (PBDEs)		N.D.	-
Monobromodiphenyl ether		N.D.	5
Dibromodiphenyl ether		N.D.	5
Tribromodiphenyl ether		N.D.	5
Tetrabromodiphenyl ether		N.D.	5
Pentabromodiphenyl ether		N.D.	5
Hexabromodiphenyl ether		N.D.	5
Heptabromodiphenyl ether		N.D.	5
Octabromodiphenyl ether		N.D.	5
Nonabromodiphenyl ether		N.D.	5
Decabromodiphenyl ether		N.D.	5

Test Part Description :

As per page 3

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Test Report

No. LPCI/24550/07
CTS Ref. CTS/07/6043/Dynacraft

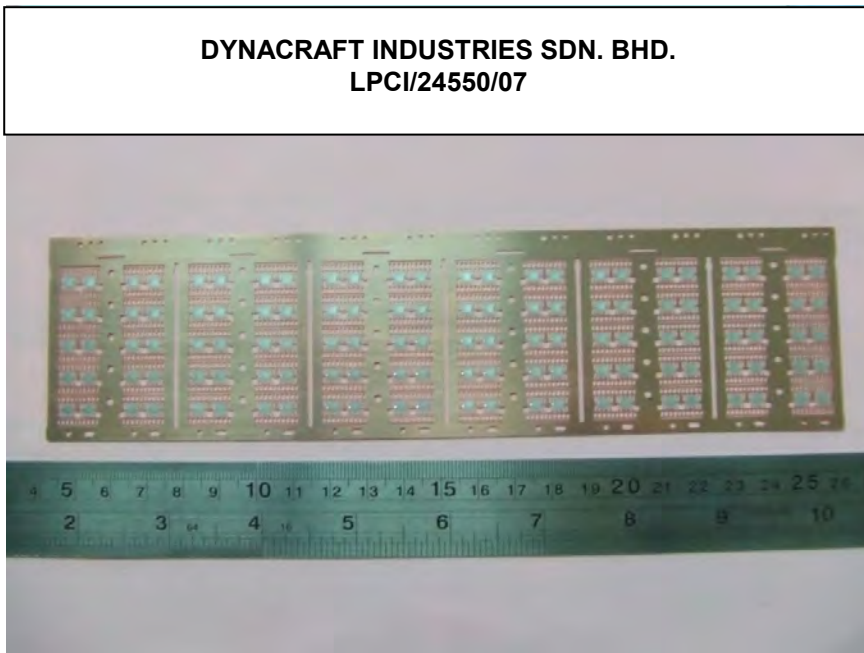
Date : 2008/01/31

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Test Part Description :

Sample Description : Spot Ag lead frame using raw copper blank C194

DYNACRAFT INDUSTRIES SDN. BHD.
LPCI/24550/07

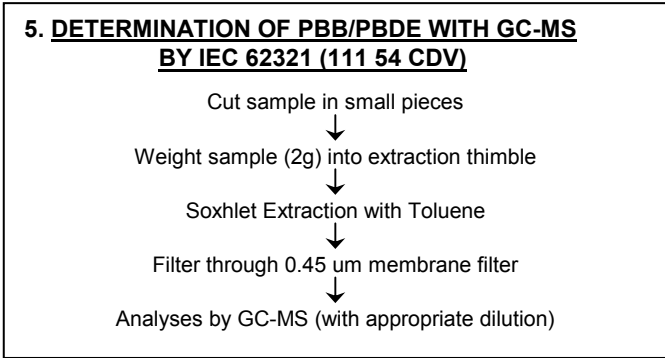
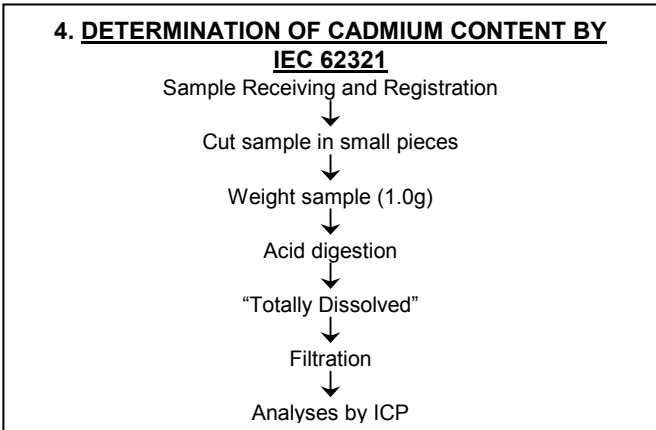
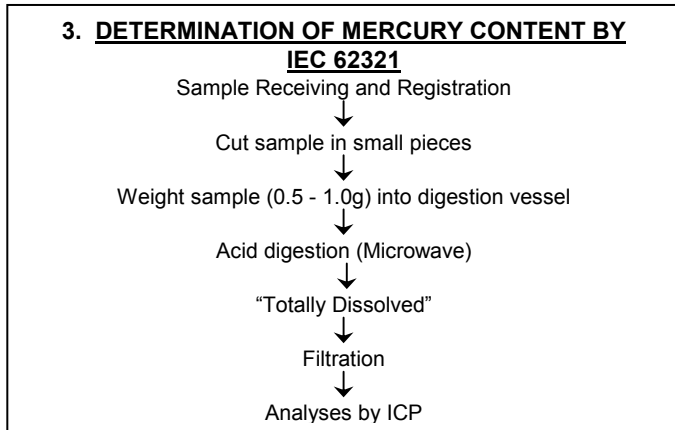
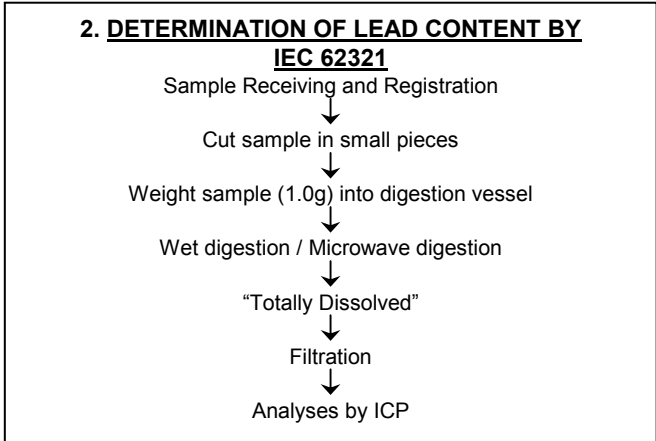
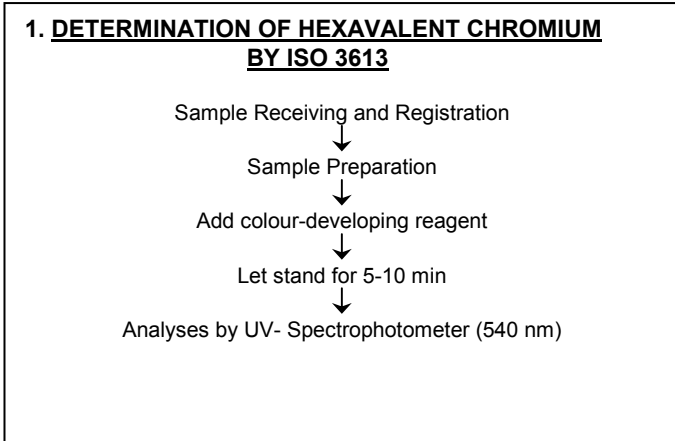


Note : (a) mg/kg = ppm
(b) N.D. = Not Detected
(c) MDL = Method Detection Limit

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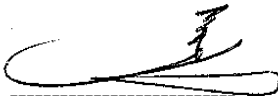
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Test Report

No. SH8050865/CHEM

Date: Apr. 16, 2008

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HERAEUS ZHAOYUAN PRECIOUS METAL MATERIALS CO., LTD/ HERAEUS ZHAOYUAN (CHANGSHU) ELECTRONIC MATERIAL CO., LTD
NO.238 LINGLONG ROAD, ZHAOYUAN SHANGDONG/ NO.248 HUANGHE ROAD CHANGSHU, JIANGSU

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Name : GOLD BONDING WIRE HD
SGS Ref No. : 10960194
Main Substance : GOLD

Sample Receiving Date : Apr.15, 2008
Testing Period : Apr.15 – 16, 2008

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : With reference to IEC 62321/2nd CDV (111/95/CDV)
Procedures for the Determination of Levels of Regulated Substances in
Electrotechnical Products
(1) Determination of Cadmium by ICP.
(2) Determination of Lead by ICP
(3) Determination of Mercury by ICP.
(4) Determination of Hexavalent Chromium by Spot test / Colorimetric Method.
(5) Determination of PBBs and PBDEs by GC/MS.

Test Results : Please refer to next pages

Conclusion : Based on the performed tests on submitted samples, the results comply with the
RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Chemical Laboratory



Ella Zhang
Section Manager

Signed for and on behalf of
SGS-CSTC Chemical Laboratory



Sandy Hao
Lab Manager

Test Report

No. SH8050865/CHEM

Date: Apr. 16, 2008

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Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	1	MDL	RoHS Limit
Cadmium(Cd)	(1)	ND	2	100
Lead (Pb)	(2)	ND	2	1000
Mercury (Hg)	(3)	ND	2	1000
Hexavalent Chromium (CrVI) by spot test / boiling-water extraction	(4)	Negative	See Note (5)	#
Sum of PBBs	(5)	ND	-	1000
Monobromobiphenyl		ND	5	-
Dibromobiphenyl		ND	5	-
Tribromobiphenyl		ND	5	-
Tetrabromobiphenyl		ND	5	-
Pentabromobiphenyl		ND	5	-
Hexabromobiphenyl		ND	5	-
Heptabromobiphenyl		ND	5	-
Octabromobiphenyl		ND	5	-
Nonabromobiphenyl		ND	5	-
Decabromobiphenyl		ND	5	-
Sum of PBDEs (Note 4)		ND	-	1000
Monobromodiphenyl ether		ND	5	-
Dibromodiphenyl ether		ND	5	-
Tribromodiphenyl ether		ND	5	-
Tetrabromodiphenyl ether		ND	5	-
Pentabromodiphenyl ether		ND	5	-
Hexabromodiphenyl ether		ND	5	-
Heptabromodiphenyl ether		ND	5	-
Octabromodiphenyl ether		ND	5	-
Nonabromodiphenyl ether		ND	5	-
Decabromodiphenyl ether	ND	5	-	
Sum of PBDEs (Mono to Deca)	ND	-	-	

Test Part Description:

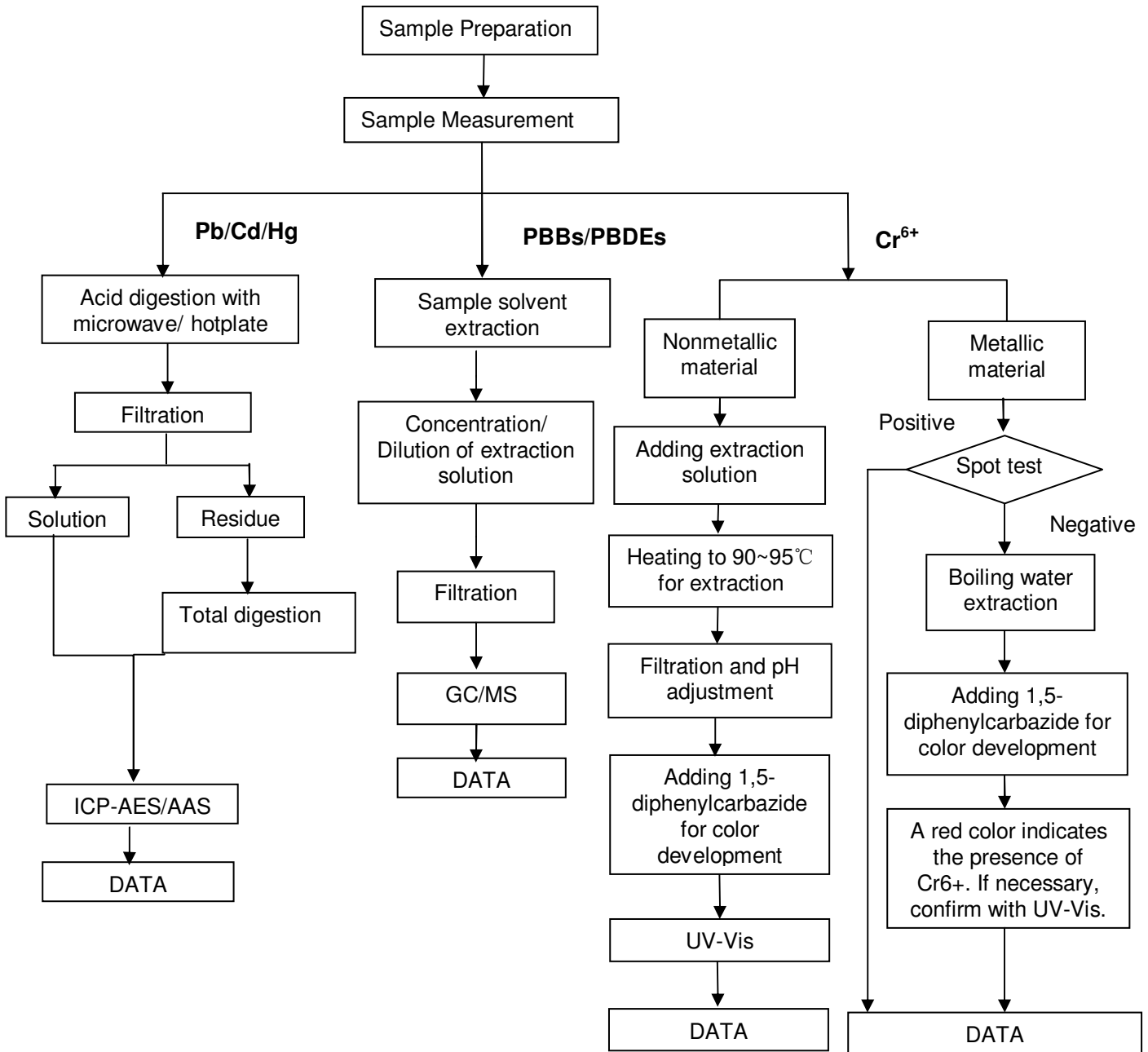
1. Golden metal thread

Note:

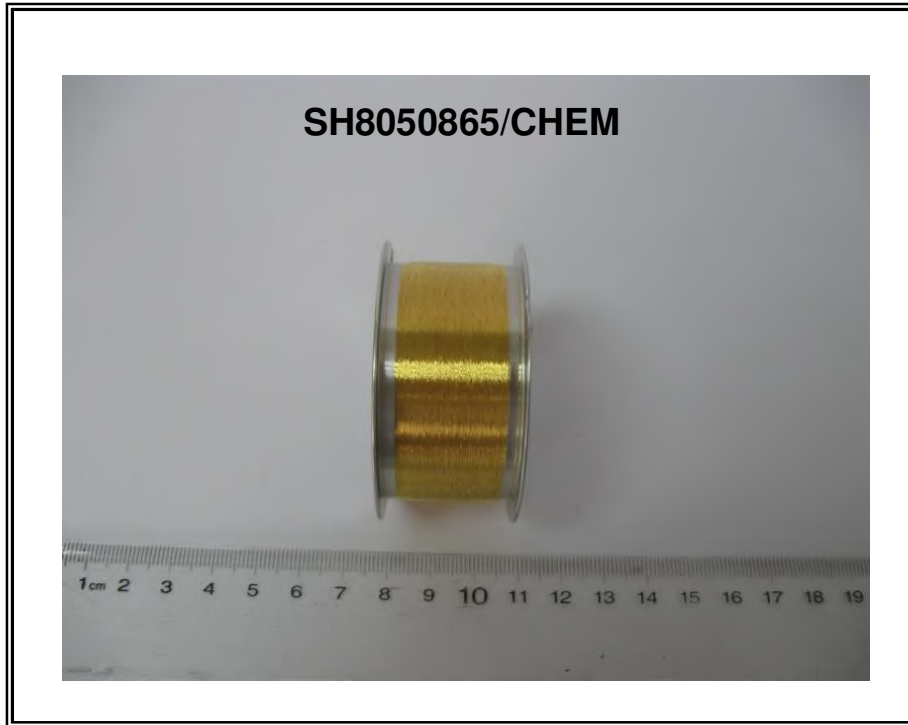
- (1) mg/kg = ppm
- (2) ND = Not Detected
- (3) MDL = Method Detection Limit
- (4) Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
- (5) Spot-test:
 - Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
 - (The tested sample should be further verified by boiling-water-extraction 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.
- (6) # = Positive indicates the presence of Hexavalent Chromium on the tested areas.
Negative indicates the absence of CrVI on the tested areas.
- (7) "-" = Not Regulated
- (8) The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2002/95/EC

ATTACHMENTS

- 1) Name of the person who made measurement: Cathy Cai/George Xu/Diane Wang
- 2) Name of the person in charge of measurement: Terry Wang/Tracy Yue
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded)



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

1. DETERMINATION OF HEXAVALENT CHROMIUM BY METHOD US EPA 3060A/7196A

Sample Preparation
 ↓
 Add colour-developing reagent
 ↓
 Acidify with H₂SO₄
 ↓
 Let stand for 5-10 min
 ↓
 Analyses by UV- Spectrophotometer (540 nm)

2. MICROWAVE ASSISTED ACID DIGESTION OF ORGANICALLY BASED METRICES (US EPA 3051A)

Cut sample in small pieces
 ↓
 Weight sample (0.2-0.5g) into digestion vessel
 ↓
 Acid digestion (HNO₃) – Microwave
 ↓
 "Totally Dissolved"
 ↓
 Filtration
 ↓
 Analyses by ICP

3. PLASTIC – DETERMINATION OF CADMIUM – WET DECOMPOSITION METHOD (EN 1122) – METHOD B

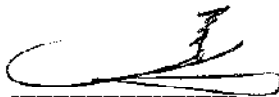
Cut sample in small pieces
 ↓
 Weight sample (1.0g) into Kjeldahl flask
 ↓
 Acid digestion (H₂SO₄)
 ↓
 "Totally Dissolved"
 ↓
 Filtration
 ↓
 Analyses by ICP

4. DETERMINATION OF PBB/PBDE WITH GC-MS

Cut sample in small pieces
 ↓
 Weight sample (2g) into extraction thimble
 ↓
 Soxhlet Extraction with Toluene
 ↓
 Filter through 0.45 um membrane filter
 ↓
 Analyses by GC-MS (with appropriate dilution)

**** End of Report ****

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Test Report

No.10111181C/08 (2)

Date: January 22, 2008

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Sumitomo Bakelite (S) Pte Ltd
1 Senoko South Road,
Singapore 758069

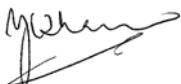
The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description : EME-7351 Type LS (8012542)
Sample Receiving Date : 17 January 2008
Testing Period : 18 January 2008 to 21 January 2008
Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

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

Conclusion : Based on the performed tests on submitted samples, the results are **compliant** with the limits of RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd



Y.C. Tham
Laboratory Manager

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

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Test Report

No.10111181C/08 (2)

Date: January 22, 2008

Page 2 of 5

Test Result(s):

Sample Description : EME-7351 Type LS (8012542)

Test Item(s):	Unit	Method	Results	MDL	RoHS Limit
Cadmium(Cd)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV – Section 12. Analysis was performed by ICP/AES.	n.d.	2	100
Lead (Pb)	mg/kg		n.d.	2	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV – Section 10. Analysis was performed by ICP/AES.	n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV – Section 8. Analysis was performed by Colorimetric Method.	Negative	See Note (4)	#
Sum of PBBs	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV – Section 7. Analysis was performed by GC/MS.	n.d.	-	1000
Monobromobiphenyl	mg/kg		n.d.	5	-
Dibromobiphenyl	mg/kg		n.d.	5	-
Tribromobiphenyl	mg/kg		n.d.	5	-
Tetrabromobiphenyl	mg/kg		n.d.	5	-
Hexabromobiphenyl	mg/kg		n.d.	5	-
Pentabromobiphenyl	mg/kg		n.d.	5	-
Heptabromobiphenyl	mg/kg		n.d.	5	-
Octabromobiphenyl	mg/kg		n.d.	5	-
Nonabromobiphenyl	mg/kg		n.d.	5	-
Decabromobiphenyl	mg/kg		n.d.	5	-
Sum of PBDE (Mono to Nona)(Note 6)	mg/kg		n.d.	-	1000
Monobromodiphenyl ether	mg/kg		n.d.	5	-
Dibromodiphenyl ether	mg/kg	n.d.	5	-	
Tribromodiphenyl ether	mg/kg	n.d.	5	-	
Tetrabromodiphenyl ether	mg/kg	n.d.	5	-	
Pentabromodiphenyl ether	mg/kg	n.d.	5	-	
Hexabromodiphenyl ether	mg/kg	n.d.	5	-	
Heptabromodiphenyl ether	mg/kg	n.d.	5	-	
Octabromodiphenyl ether	mg/kg	n.d.	5	-	
Nonabromodiphenyl ether	mg/kg	n.d.	5	-	
Decabromodiphenyl ether	mg/kg	n.d.	5	-	
Sum of PBDEs (Mono to Deca)	mg/kg	n.d.	-	-	

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

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Test Report

No.10111181C/08 (2)

Date: January 22, 2008

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- Note:
- (1) mg/kg = ppm
 - (2) n.d.= Not Detected = Denoted less than MDL
 - (3) MDL = Method Detection Limit
 - (4) Boiling-water-extraction:
 - Negative = Absence of Cr(VI) coating / surface layer.
 - Positive = Presence of Cr(VI) coating / surface layer;
 - the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
 - (5) # : Positive means the presence of Cr(VI) on the tested areas and result be regarded as not comply with RoHS requirement.
Negative means the absence of Cr(VI) on the tested areas and result be regarded as comply with RoHS requirement.
 - (6) Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
 - (7) “-“ = Not regulated
 - (8) “ --- “ = Not Conducted

Remarks: Sample received was totally dissolved by preconditioning & destroyed after the analysis.
Lab Analyst: Christine Choy, Irene Li & Jessica Chong.

Sample photo:

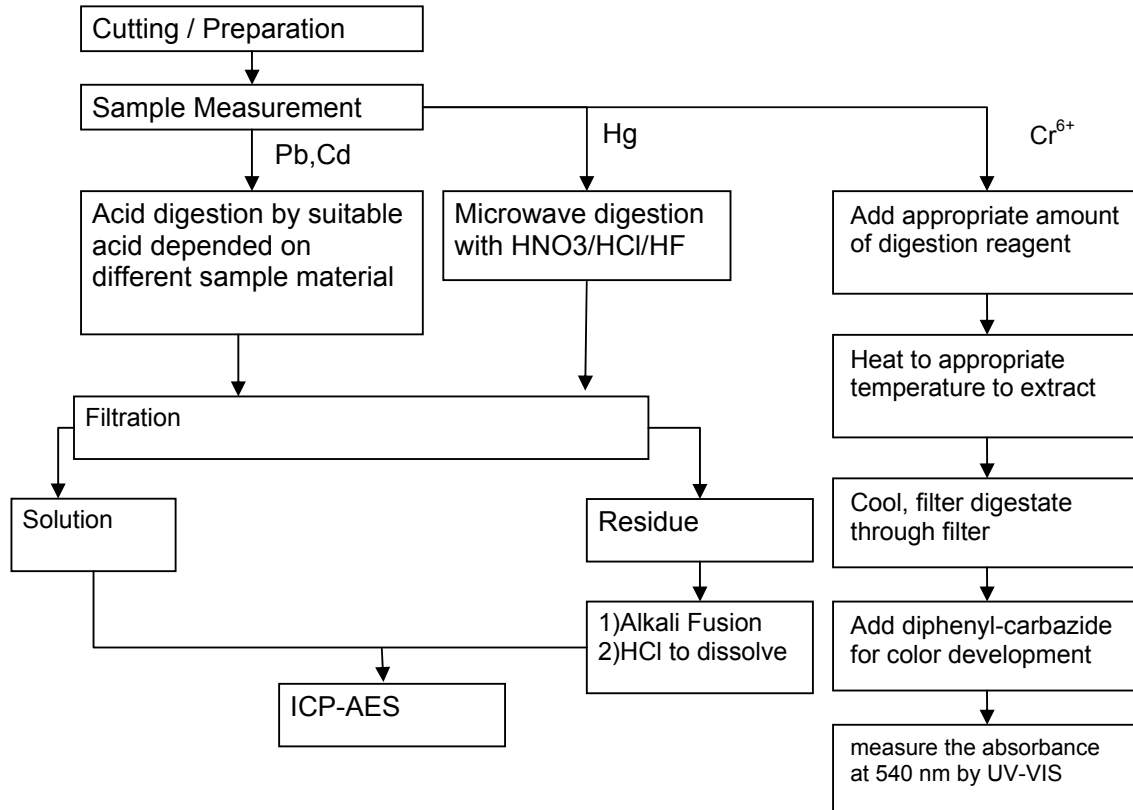


SGS authenticate the photo on original report only

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

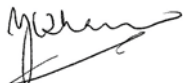
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Process Flow of IEC 62321 (Pb, Cd, Hg & Cr⁶⁺)



Lab Analyst : Jessica Chong & Christine Choy.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd

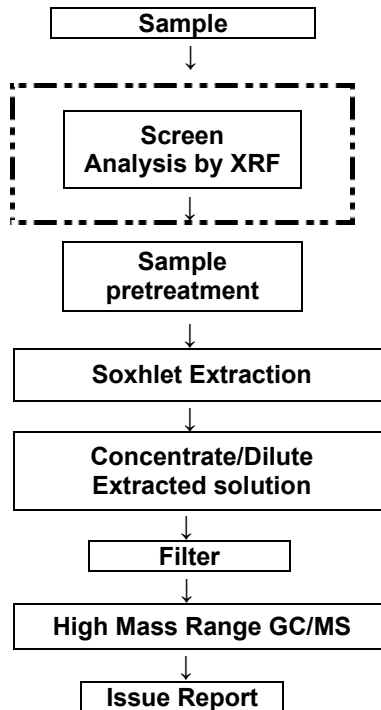


Y.C. Tham
Laboratory Manager

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944
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Process Flow of PBBs and PBDEs by GC/MS (IEC 62321)

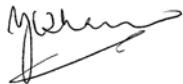
First Testing Process → Optional screen process Confirmation process ...→



Lab Analyst : Irene Li

Sample received has been totally digested and dissolved by preconditioning method.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd



Y.C. Tham
Laboratory Manager

End of Report

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

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Test Report

No. SH8071893/CHEM

Date: May. 26, 2008

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SHANGHAI KAIHONG ELECTRONIC CO., LTD
NO.999 CHENCHUN ROAD, SONGJIANG DISTRICT, SHANGHAI, CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Name : DIE ATTACHED ADHESIVE
SGS Ref No. : 11036937-4
Part No. : 84-1 LIMSR4
Material : SILVER, RESIN
Supplier : ABLESTIK

Sample Receiving Date : May.22, 2008
Testing Period : May.22 – 26, 2008

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives

Test Method : (1) With reference to IEC 62321/2nd CDV (111/95/CDV) for Cadmium content.
Analysis was performed by ICP.
(2) With reference to IEC 62321/2nd CDV (111/95/CDV) for Lead content.
Analysis was performed by ICP and AAS.
(3) With reference to IEC 62321/2nd CDV (111/95/CDV) for Mercury content.
Analysis was performed by ICP.
(4) With reference to IEC 62321/2nd CDV (111/95/CDV) for Hexavalent Chromium by Colorimetric Method.
(5) With reference to IEC 62321/2nd CDV (111/95/CDV) for PBBs / PBDEs content.
Analysis was performed by GC/MS.

Test Results : Please refer to next pages

Signed for and on behalf of
SGS-CSTC Chemical Laboratory



Ella Zhang
Section Manager

Signed for and on behalf of
SGS-CSTC Chemical Laboratory



Sandy Hao
Lab Manager

Test Report

No. SH8071893/CHEM

Date: May. 26, 2008

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Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	1	MDL	RoHS Limit
Cadmium(Cd)	(1)	ND	2	100
Lead (Pb)	(2)	ND	2	1000
Mercury (Hg)	(3)	ND	2	1000
Hexavalent Chromium (CrVI)	(4)	ND	2	1000
Sum of PBBs	(5)	ND	-	1000
Monobromobiphenyl		ND	5	-
Dibromobiphenyl		ND	5	-
Tribromobiphenyl		ND	5	-
Tetrabromobiphenyl		ND	5	-
Pentabromobiphenyl		ND	5	-
Hexabromobiphenyl		ND	5	-
Heptabromobiphenyl		ND	5	-
Octabromobiphenyl		ND	5	-
Nonabromobiphenyl		ND	5	-
Decabromobiphenyl		ND	5	-
Sum of PBDEs (Note 4)		ND	-	1000
Monobromodiphenyl ether		ND	5	-
Dibromodiphenyl ether		ND	5	-
Tribromodiphenyl ether		ND	5	-
Tetrabromodiphenyl ether		ND	5	-
Pentabromodiphenyl ether		ND	5	-
Hexabromodiphenyl ether		ND	5	-
Heptabromodiphenyl ether		ND	5	-
Octabromodiphenyl ether		ND	5	-
Nonabromodiphenyl ether	ND	5	-	
Decabromodiphenyl ether	ND	5	-	
Sum of PBDEs (Mono to Deca)	ND	-	-	

(Result shown is of the total weight of dried sample)

Test Part Description:

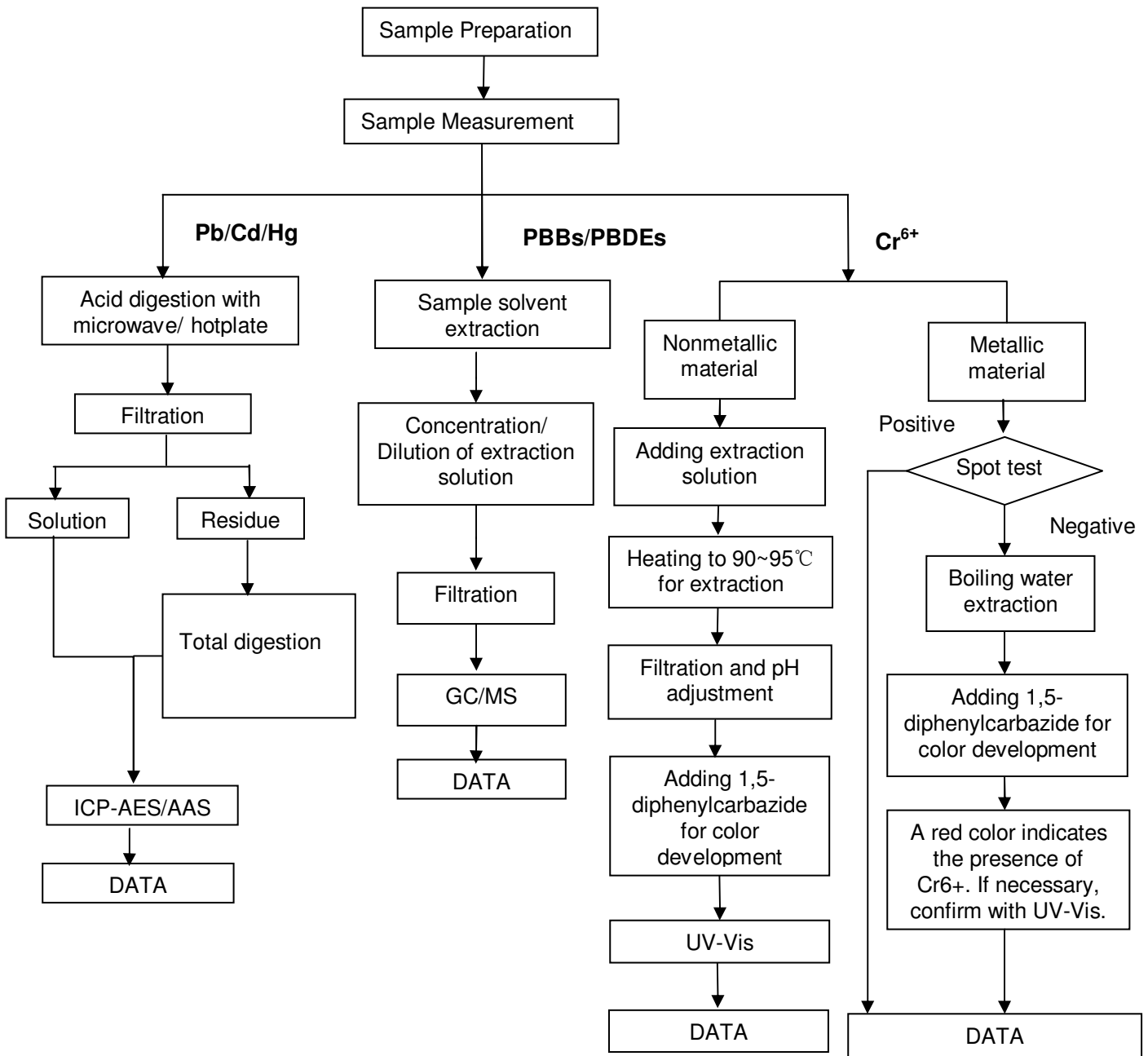
1. Grey mud

Note:

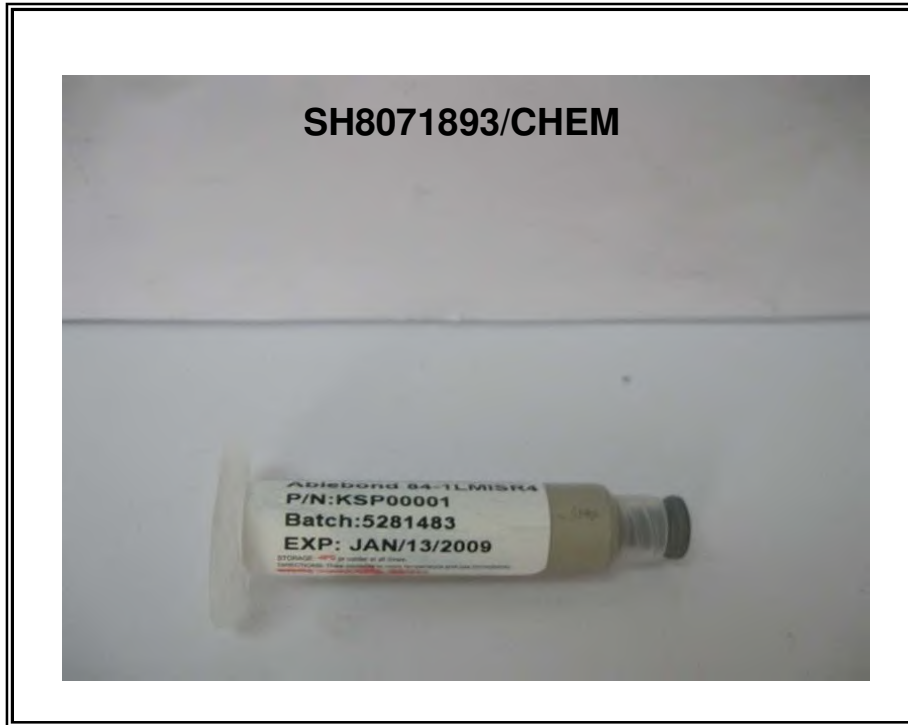
- (1) mg/kg = ppm
- (2) ND = Not Detected
- (3) MDL = Method Detection Limit
- (4) Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
- (5) "-" = Not Regulated
- (6) The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2002/95/EC

ATTACHMENTS

- 1) Name of the person who made measurement: Cathy Cai/George Xu/Diane Wang
- 2) Name of the person in charge of measurement: Terry Wang/Tracy Yue
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ and PBBs/PBDEs test method excluded)



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

Test Report

No. LPCI/24763/07

Date : 2007/12/31

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CTS Ref. CTS/07/6092/Redring

REDRING SOLDER (M) SDN. BHD.
LOT 17486, JALAN DUA, TAMAN SELAYANG BARU,
68100 BATU CAVES, SELANGOR DARUL EHSAN, MALAYSIA.

The following merchandise was (were) submitted and identified by the client as:

Sample Description : Pure Tin Anode
Sample Receiving Date : 2007/12/24
Testing Period : 2007/12/24 to 2007/12/31

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : (1) With reference to IEC 62321 for Cadmium Content. Analysis was performed by ICP
(2) With reference to IEC 62321 for Lead Content. Analysis was performed by ICP
(3) With reference to IEC 62321 for Mercury Content. Analysis was performed by ICP
(4) With reference to IEC 62321, Ed1 (111 54 CDV) Section 8.5.1 for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrophotometry.
(5) With reference to IEC 62321, Ed1 (111 54 CDV). Determination of PBBs and PBDEs by GC/MS.

Test Results : Please refer to next page.

Analysts : Lim Meng Hoe & Jocelyn Christmas

SGS LABORATORY SERVICES (M) SDN. BHD.



CHONG KIEN LEN
B.Sc.(HONS) AMIC
LAB MANAGER

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Test Report

No. LPCI/24763/07

Date : 2007/12/31

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CTS Ref. CTS/07/6092/Redring


Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	Result	MDL
Cadmium(Cd)	(1)	N.D.	2
Lead (Pb)	(2)	10	2
Mercury (Hg)	(3)	N.D.	2
Hexavalent Chromium (CrVI)	(4)	Negative	*
Sum of Polybrominated Biphenyl (PBBs)	(5)	N.D.	-
Monobromobiphenyl		N.D.	5
Dibromobiphenyl		N.D.	5
Tribromobiphenyl		N.D.	5
Tetrabromobiphenyl		N.D.	5
Pentabromobiphenyl		N.D.	5
Hexabromobiphenyl		N.D.	5
Heptabromobiphenyl		N.D.	5
Octabromobiphenyl		N.D.	5
Nonabromobiphenyl		N.D.	5
Decabromobiphenyl		N.D.	5
Sum of Polybrominated Diphenylethers (PBDEs)		N.D.	-
Monobromodiphenyl ether		N.D.	5
Dibromodiphenyl ether		N.D.	5
Tribromodiphenyl ether		N.D.	5
Tetrabromodiphenyl ether		N.D.	5
Pentabromodiphenyl ether		N.D.	5
Hexabromodiphenyl ether		N.D.	5
Heptabromodiphenyl ether		N.D.	5
Octabromodiphenyl ether		N.D.	5
Nonabromodiphenyl ether		N.D.	5
Decabromodiphenyl ether		N.D.	5

Test Part Description :

As per page 3

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Test Report

No. LPCI/24763/07

Date : 2007/12/31

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CTS Ref. CTS/07/6092/Redring

Test Part Description :

Sample Description : Pure Tin Anode

- Note :
- (a) mg/kg = ppm
 - (b) N.D. = Not Detected
 - (c) MDL = Method Detection Limit
 - (d) *Detection limit = 1 mg/kg of Hexavalent Chromium on the tested areas
Negative = less than detection limit

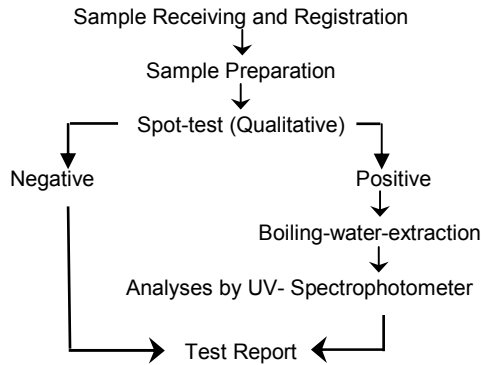
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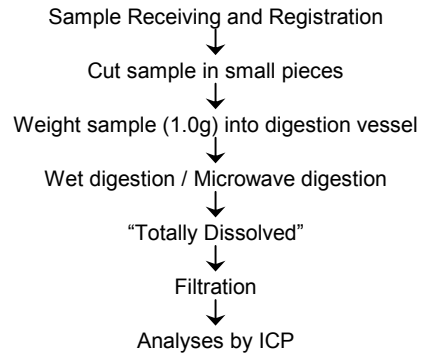
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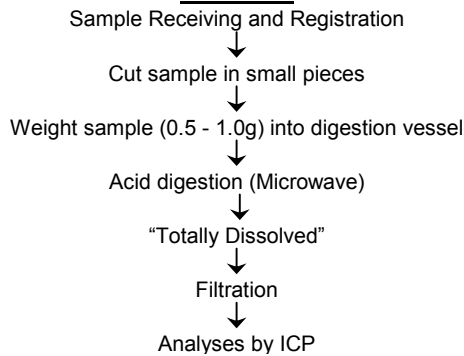
**1. DETERMINATION OF HEXAVALENT CHROMIUM
 BY IEC 62321 (111 54 CDV)**



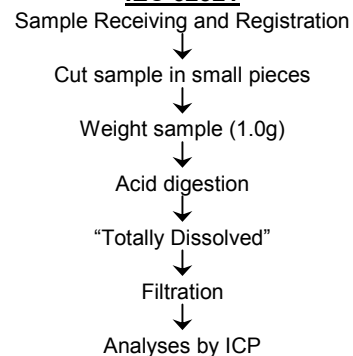
**2. DETERMINATION OF LEAD CONTENT BY
 IEC 62321**



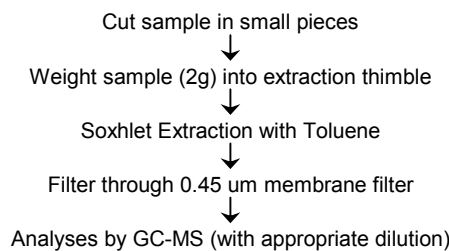
**3. DETERMINATION OF MERCURY CONTENT BY
 IEC 62321**



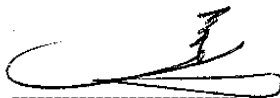
**4. DETERMINATION OF CADMIUM CONTENT BY
 IEC 62321**



**5. DETERMINATION OF PBB/PBDE WITH GC-MS
 BY IEC 62321 (111 54 CDV)**



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