



## ICP Test Report Certification Packet

Company name: Littelfuse, Inc.  
Product Series: P6KE, SA, SAC, 3T, P5KE Series  
Product #: DO – 15 - TVS Diode  
Issue Date: November 4, 2011

It is hereby certified by Littelfuse, Inc. that there is neither RoHS (EU Directive 2002/95/EC)-restricted substance nor such use, for materials to be used for unit parts, for packing/packaging materials, and for additives and the like in the manufacturing processes. In addition, it is hereby reported to you that the parts and sub-materials, the materials to be used for unit parts, the packing/packaging materials, and the additives and the like in the manufacturing processes, are all composed of the following components.

Issued by:   
KRISTEEN BACILA

\_\_\_\_\_  
< Global EHS Engineer >

(1) Parts, sub-materials and unit parts

This document covers the P6KE, SA, SAC, 3T RoHS-Compliant series products manufactured by Littelfuse, Inc.

< Raw Materials Used

Please see Table 1

(2) The ICP data on all measurable substances

Please see appropriate pages as identified in Table 1

**Remarks : under RoHS Exemptions 5 (7c-1 in the New RoHS exemption) and 7a apply to these products.**



**Table 1: List of Raw Materials covered by this report**

<b>Total Parts</b>	<b>Raw Material Part Number</b>	<b>Raw Material Description</b>	<b>Page(s)</b>
1	NA	Chip	3-7
2	NA	Silicon Wafer with Nickel plating	8-12
3	NA	Wafer PAssivation (Glass)	13-19
4	NA	Lead Wire	20-23
5	NA	Solder Wafer	24-29
7	NA	Solder Wafer	30-35
8	NA	Copper Spacer	36-39
9	NA	Epoxy Molding Compound - RoHS	40-46
10	NA	Epoxy Molding Compound - Pthalates/ HBCDD	47-52
11	NA	Tin Plating	53-58
12	NA	UV Ink - RoHS	59-65
13	NA	UV Ink – Phthalates/ HBCDD	66-71



TEST REPORT

Number : WUXH00005706S1

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 10, 2011  
THIS IS TO SUPERSEDE REPORT  
NO. WUXH00005706 DATED  
AUG 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Grey Metal.**

Item Name : Chip.  
Vendor : Littelfuse Concord.  
Component Or Part No. : Silicon+Nickel+Glass.  
Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs.

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Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



TEST REPORT

Number : WUXH00005706S1

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	6110
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005706S1

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

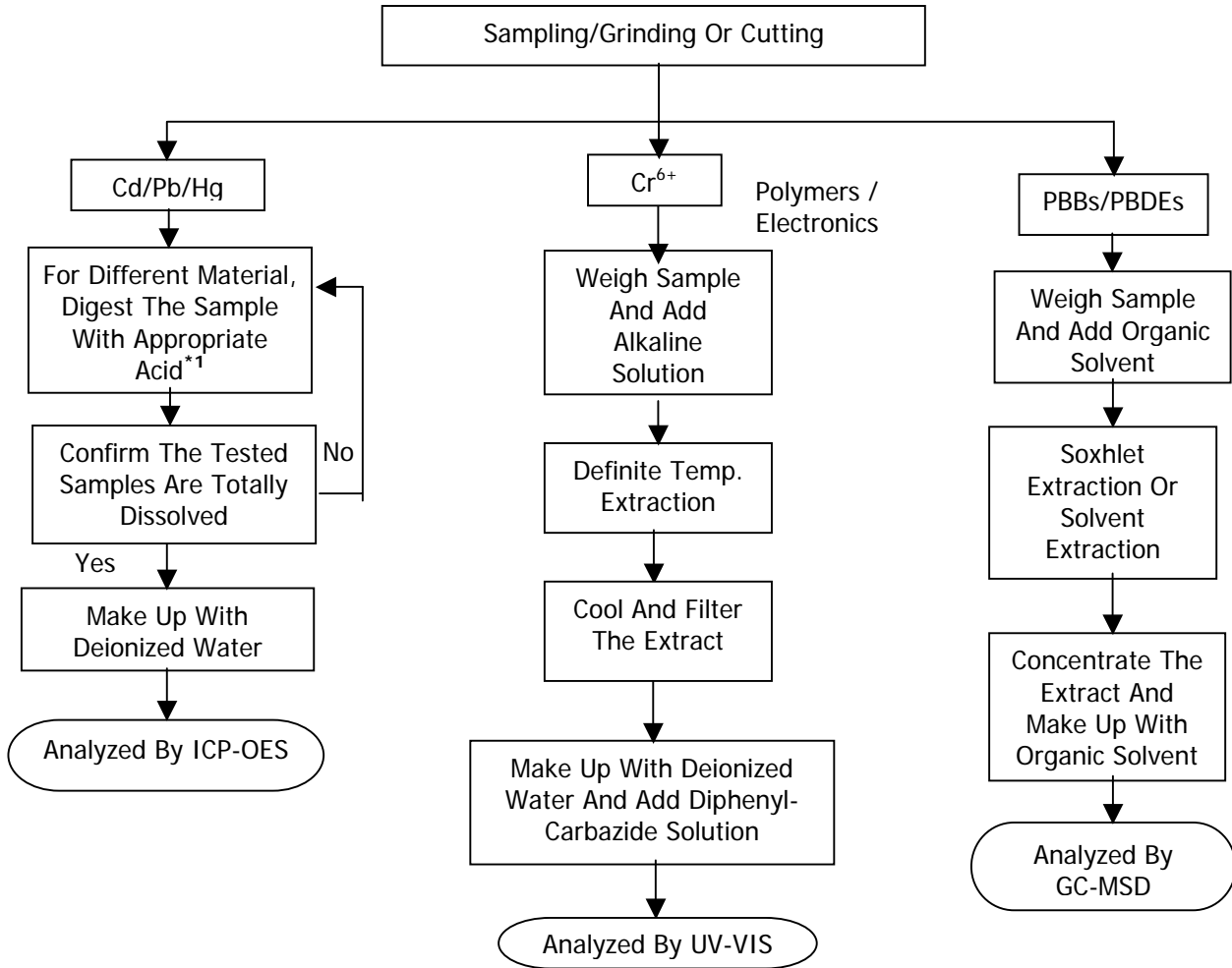
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:  
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005703

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Grey Metal.**

Item Name : Silicon Wafer With Nickel Plating.

Vendor : Concord.

Component Or Part No. : Silicon+Nickel.

Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs.

Remark : As Requested By The Applicant, Tested As A Whole And Sampled Randomly.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager





Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	48
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005703

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

<b>Restricted Substances</b>	<b>Limits</b>
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

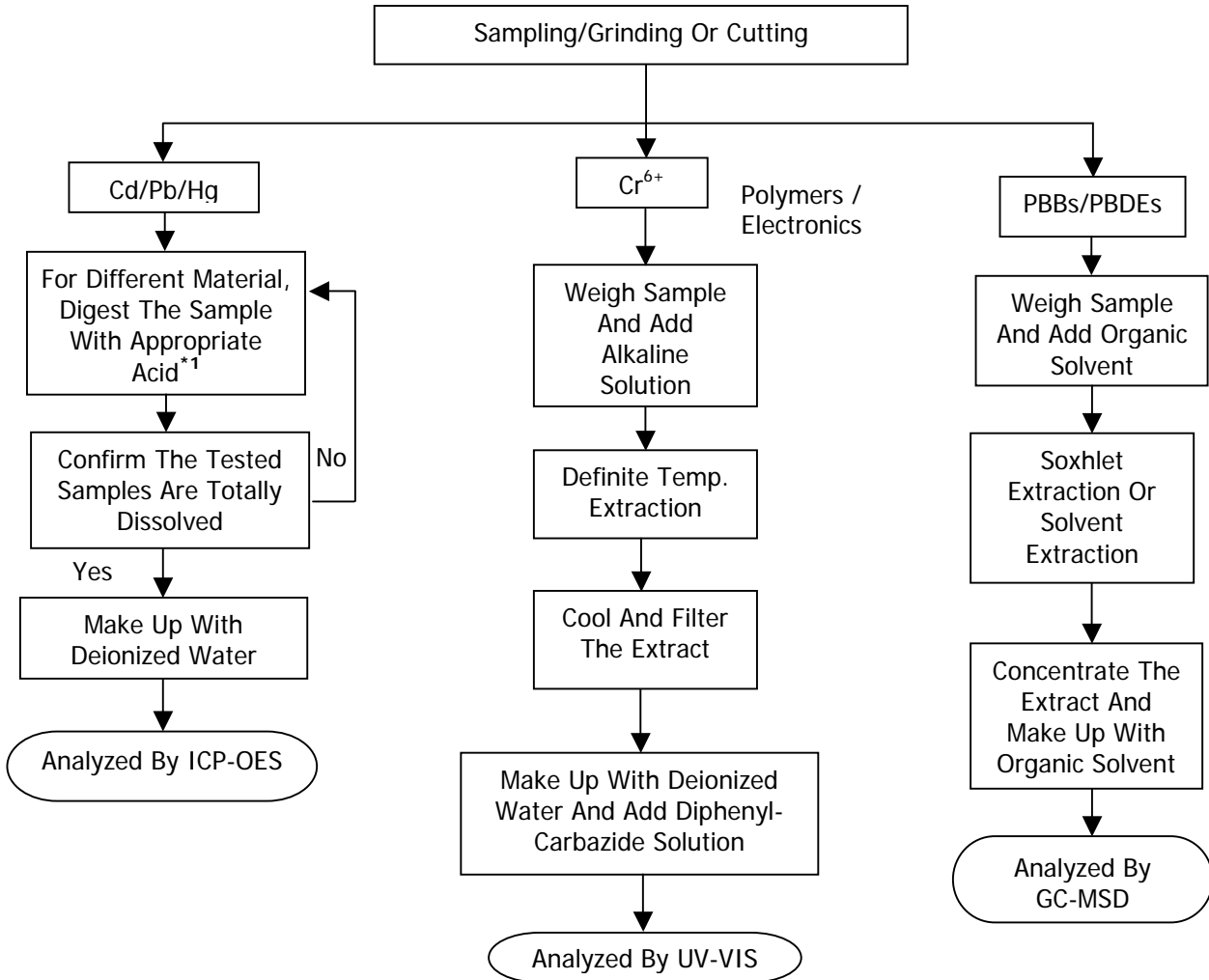
<b>Testing Item</b>	<b>Testing Method</b>	<b>Reporting Limit</b>
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:  
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

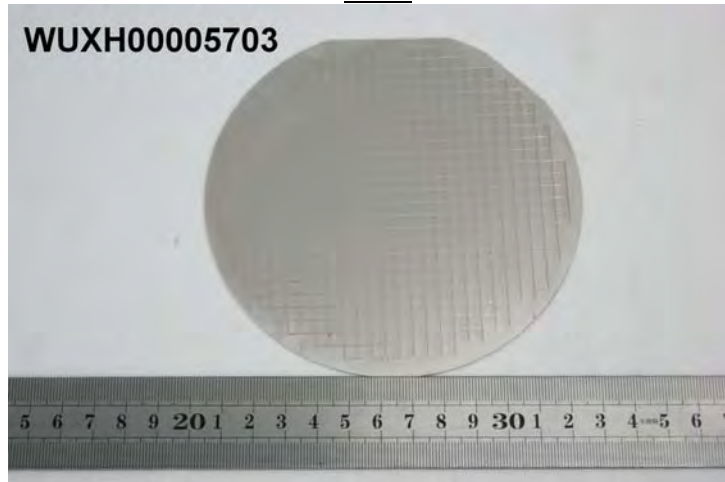
Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

Tests Conducted (As Requested By The Applicant)

Photo



TEST REPORT

Number : WUXH00005704

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **White Power.**

Item Name : Wafer Passivation.  
Vendor : Propriety.  
Component Or Part No. : Propriety.  
Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs,F,Cl,Br,I.

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Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.



Jessica Lu  
General Manager



Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	185100
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected

#=The Result Is For Reference Only.



TEST REPORT

Number : WUXH00005704

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

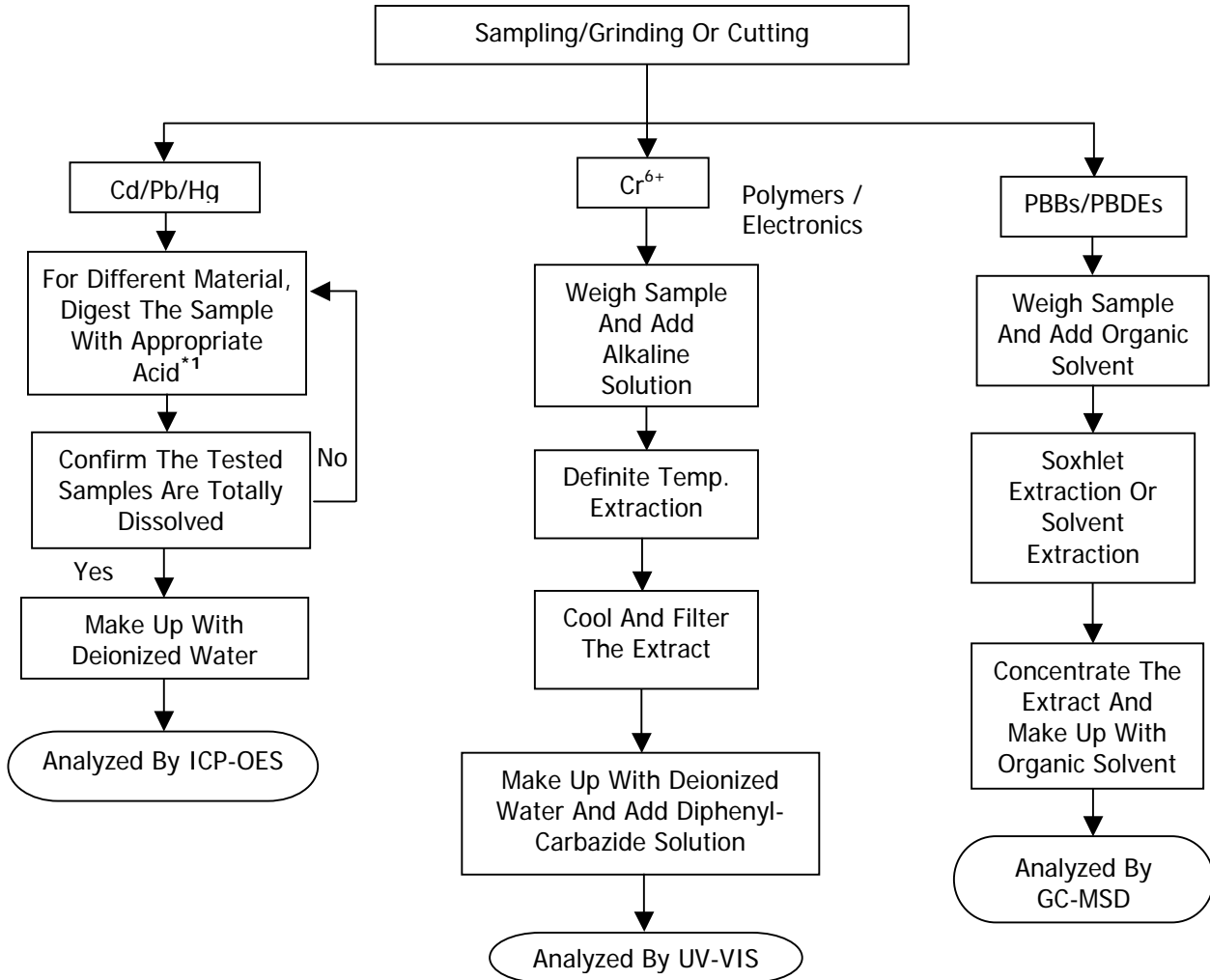
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:  
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

2 Halogen Test  
(I) Test Result Summary :





TEST REPORT

Number : WUXH00005704

Tests Conducted (As Requested By The Applicant)

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl) Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

(II) Test Method :

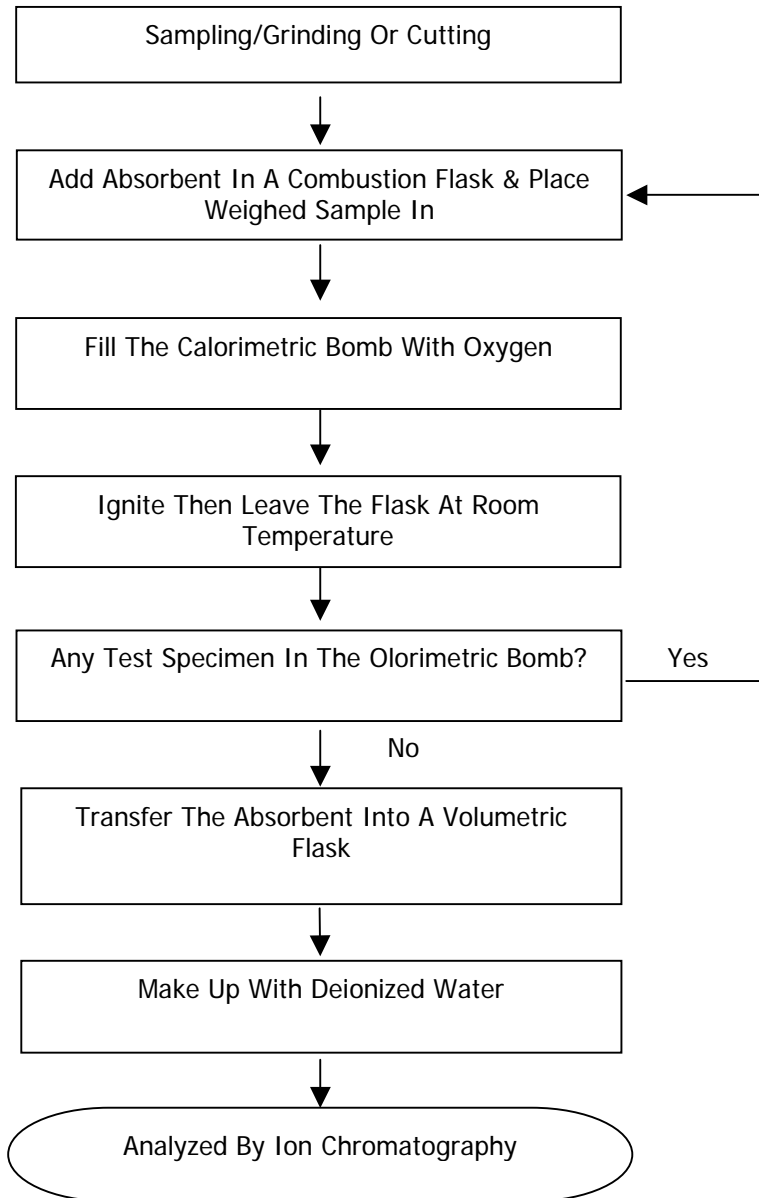
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F, Cl, Br, I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

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Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005708

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK  
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,  
WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Golden Yellow Metal.**

Item Name : Lead Wire.  
Vendor : Shanghai Bontech Enterprise.  
Component Or Part No. : Alloy Copper.  
Test Item : Cd,Pb,Hg,CrVI.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



TEST REPORT

Number : WUXH00005708

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	ND
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm <sup>2</sup> )	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm<sup>2</sup> = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

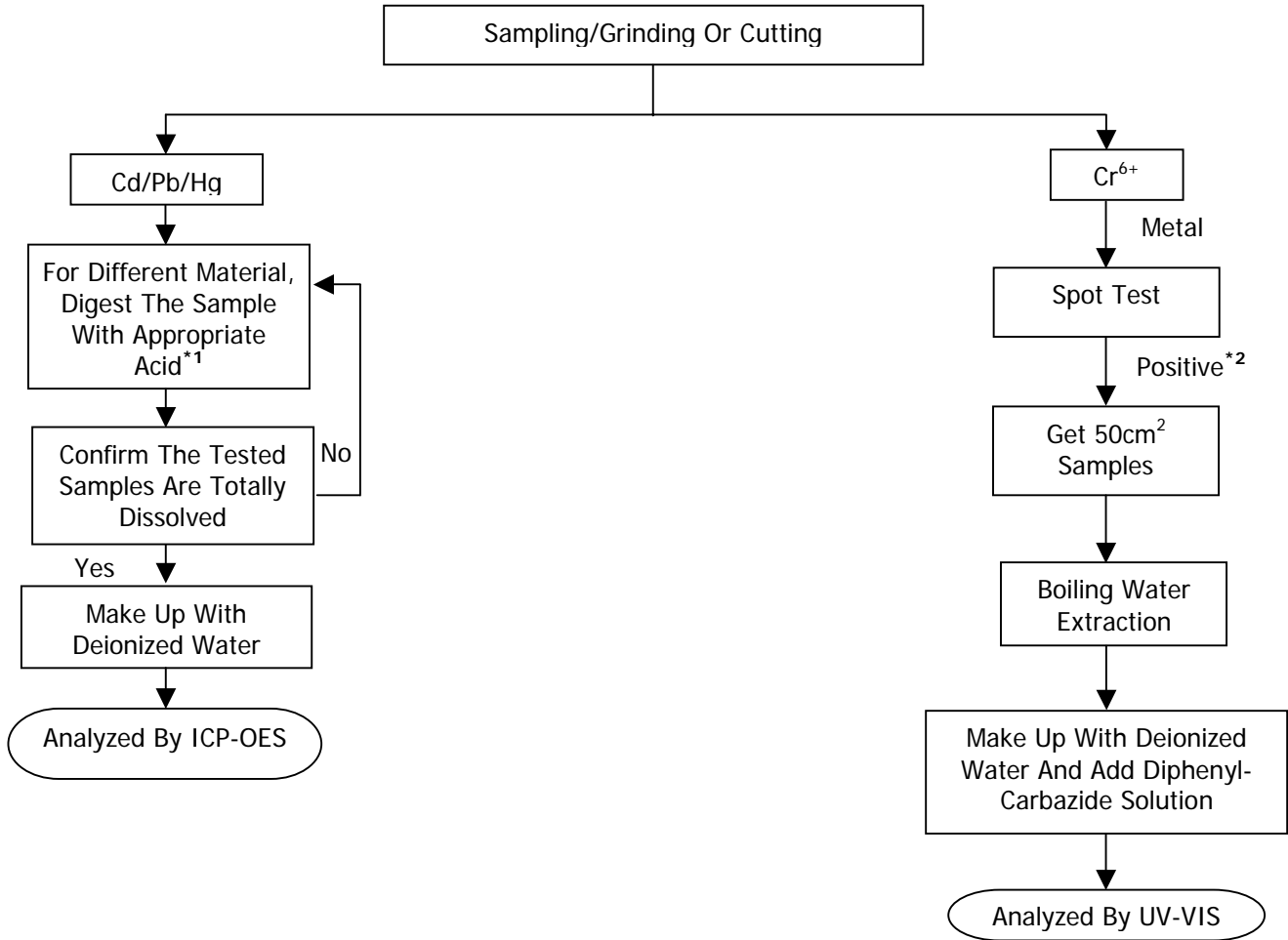
(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm <sup>2</sup> (In Testing Solution)

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 03, 2011

Tests Conducted (As Requested By The Applicant)  
 (D) Measurement Flowchart:  
 Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005732

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silver Metal.**

Item Name : Solder Wafer.  
Vendor : Jin Zhou Rongheng Electronics Co.  
Component Or Part No. : Pb:Sn:Ag=92.5:5:2.5.  
Test Item : Cd,Pb,Hg,CrVI,F,Cl,Br,I.

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Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager





TEST REPORT

Number : WUXH00005732

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	901600
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm <sup>2</sup> )	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm<sup>2</sup> = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

#=The Result Is For Reference Only.

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm <sup>2</sup> (In Testing Solution)

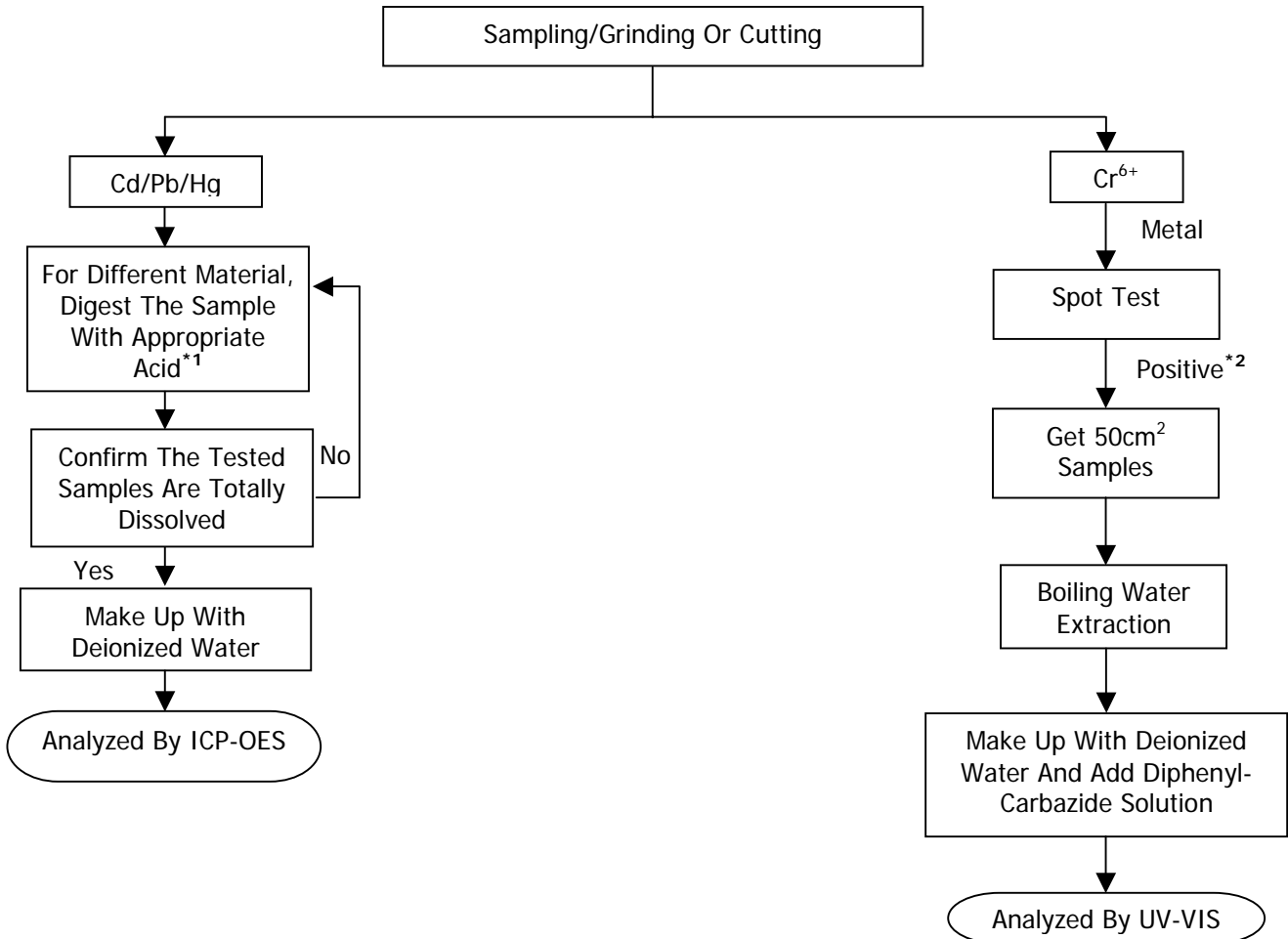
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.



TEST REPORT

Number : WUXH00005732

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl)Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

(II) Test Method :

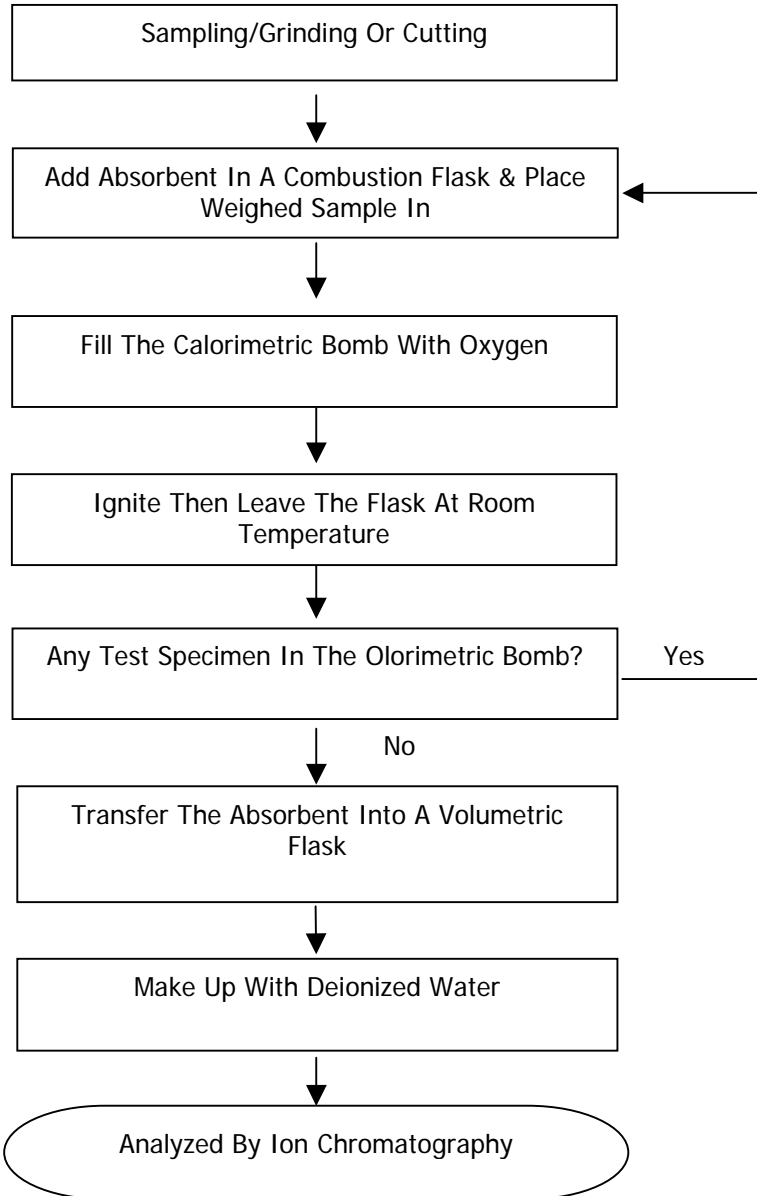
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005734

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silver Metal.**

Item Name : Solder Wafer.  
Vendor : Coining Inc.  
Component Or Part No. : Pb:Sn:Ag=92.5:5:2.5.  
Test Item : Cd,Pb,Hg,CrVI,F,Cl,Br,I.

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Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



TEST REPORT

Number : WUXH00005734

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	953100
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm <sup>2</sup> )	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm<sup>2</sup> = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

#=The Result Is For Reference Only.

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm <sup>2</sup> (In Testing Solution)

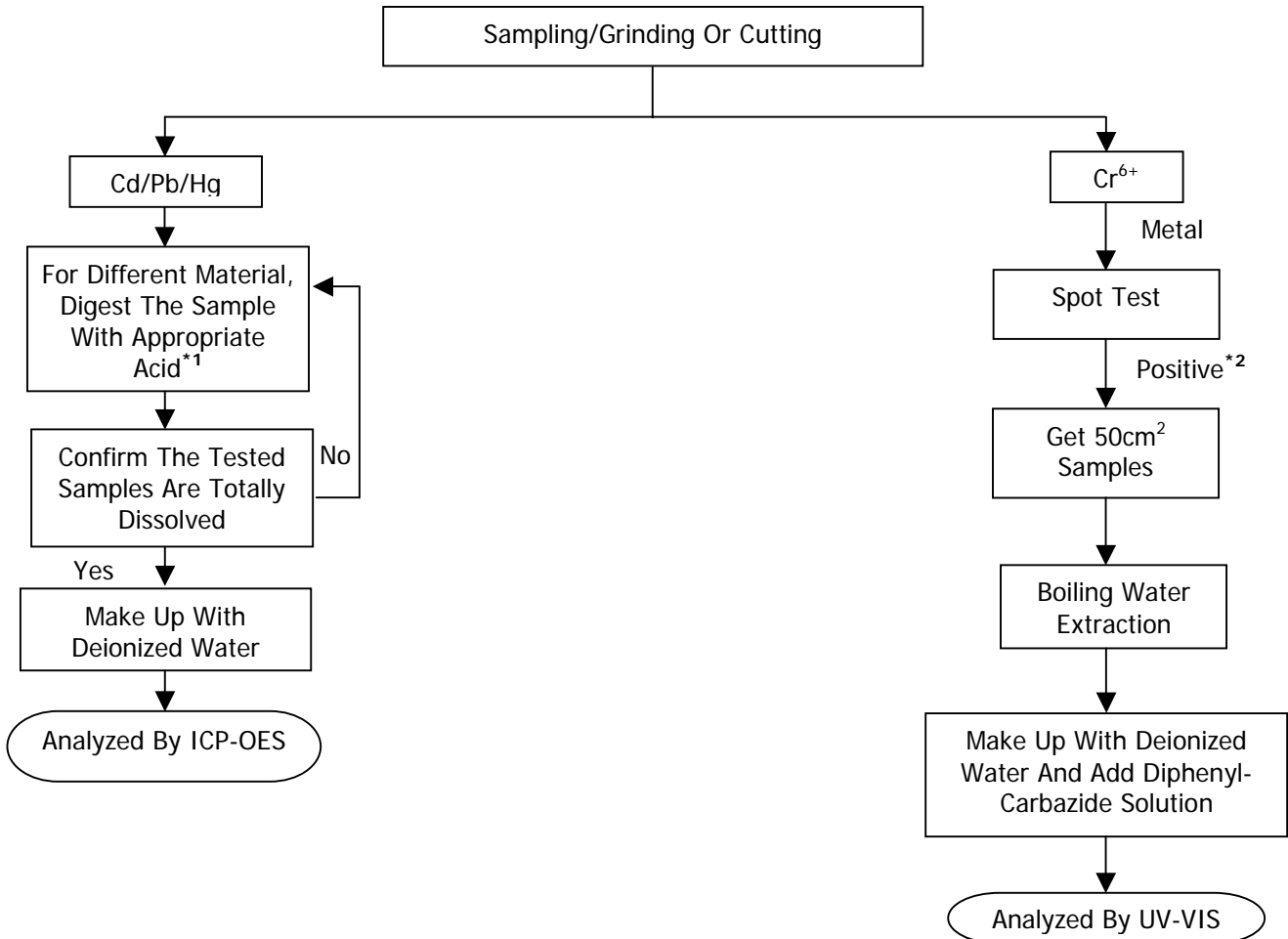
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.





TEST REPORT

Number : WUXH00005734

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl) Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

(II) Test Method :

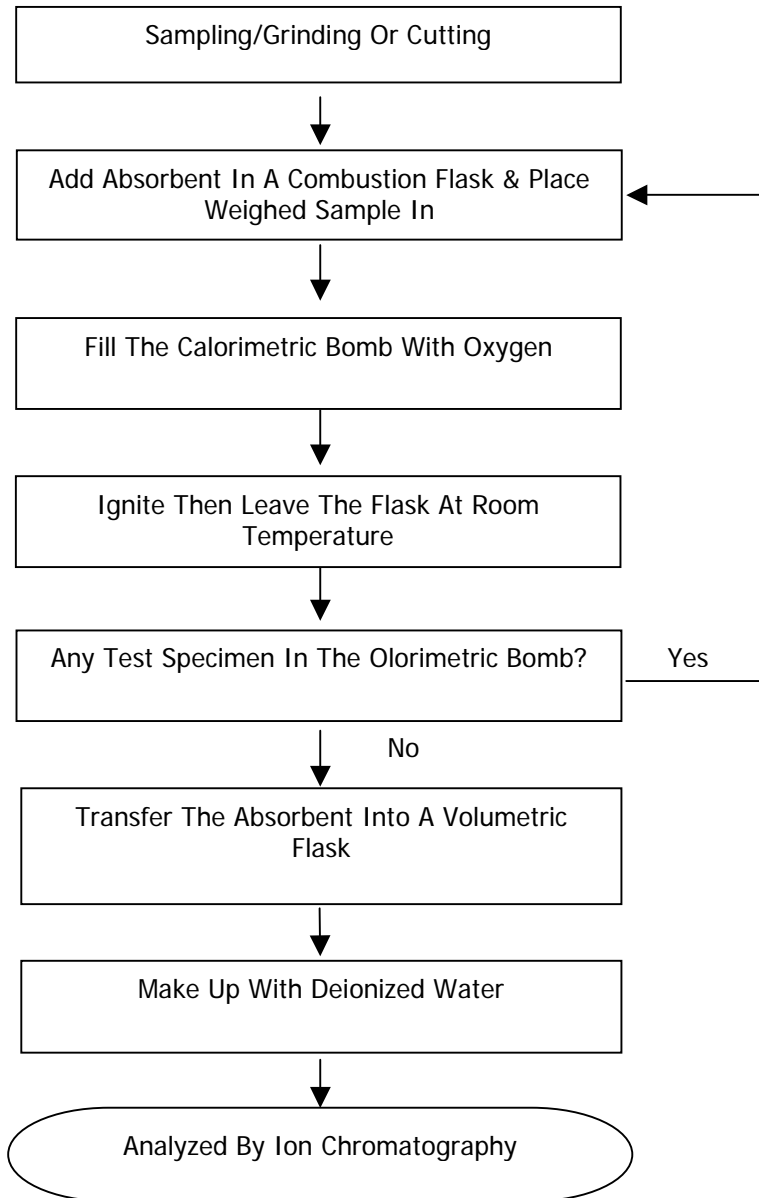
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

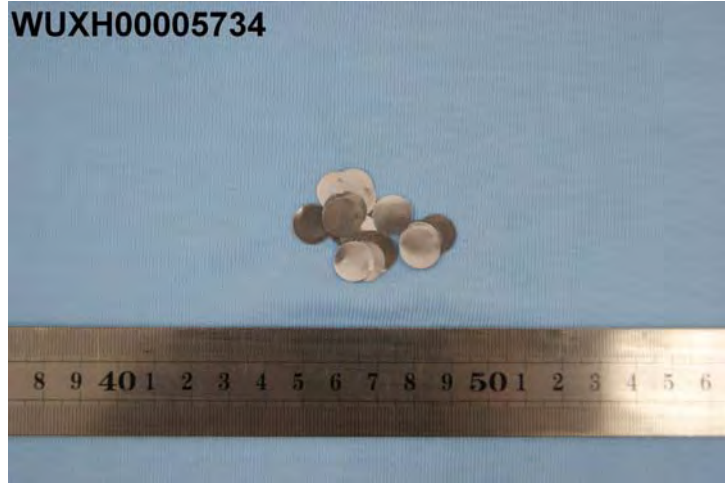
Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005717

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK  
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,  
WUXI, JIANGSU ,CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Metal.**

Item Name : Copper Spacer(Circle).  
Vendor : Sung Jung Minute Industry CO., LTD.  
Component Or Part No. : Copper With Ag Plating.  
Test Item : Cd,Pb,Hg,CrVI.  
Remark : As Requested By The Applicant, Tested As A Whole And Sampled Randomly.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



TEST REPORT

Number : WUXH00005717

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	ND
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm <sup>2</sup> )	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm<sup>2</sup> = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

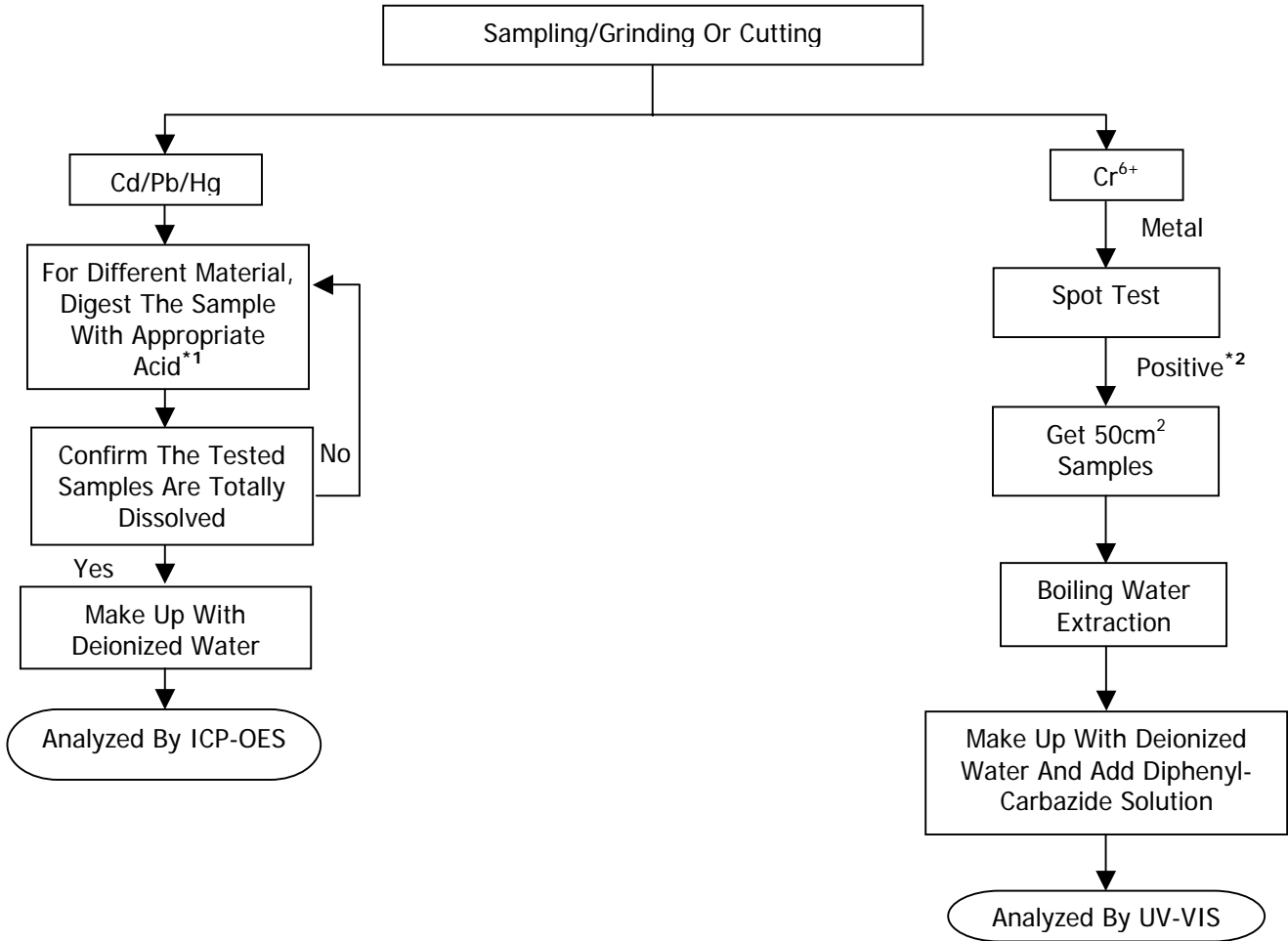
(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm <sup>2</sup> (In Testing Solution)

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 03, 2011

Tests Conducted (As Requested By The Applicant)  
 (D) Measurement Flowchart:  
 Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005740

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK  
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,  
WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Brown Epoxy Molding Compound.**

Item Name : Epoxy Molding Compound.  
Vendor : Chang Chun Plastics Co., LTD.  
Component Or Part No. : EME-E110G.  
Test Item : Cd, Pb, Hg, CrVI, PBBs, PBDEs, F, Cl, Br, I.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager





TEST REPORT

Number : WUXH00005740

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	ND
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005740

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC-MSD And Further HPLC Confirmation When Necessary.	5 mg/kg

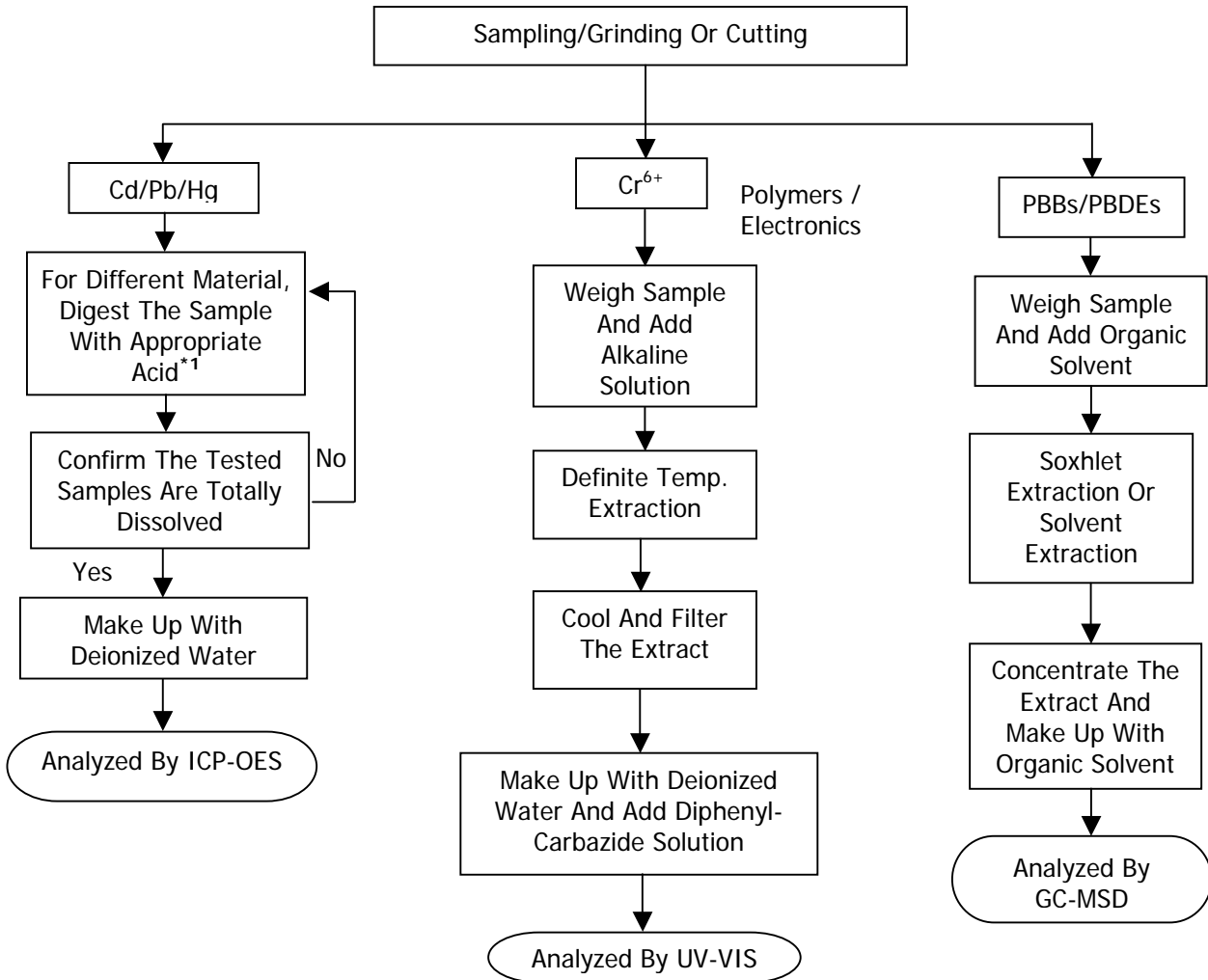
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
 Organic (Jenny Xu/Cherry Sun)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>



TEST REPORT

Number : WUXH00005740

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl)Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

(II) Test Method :

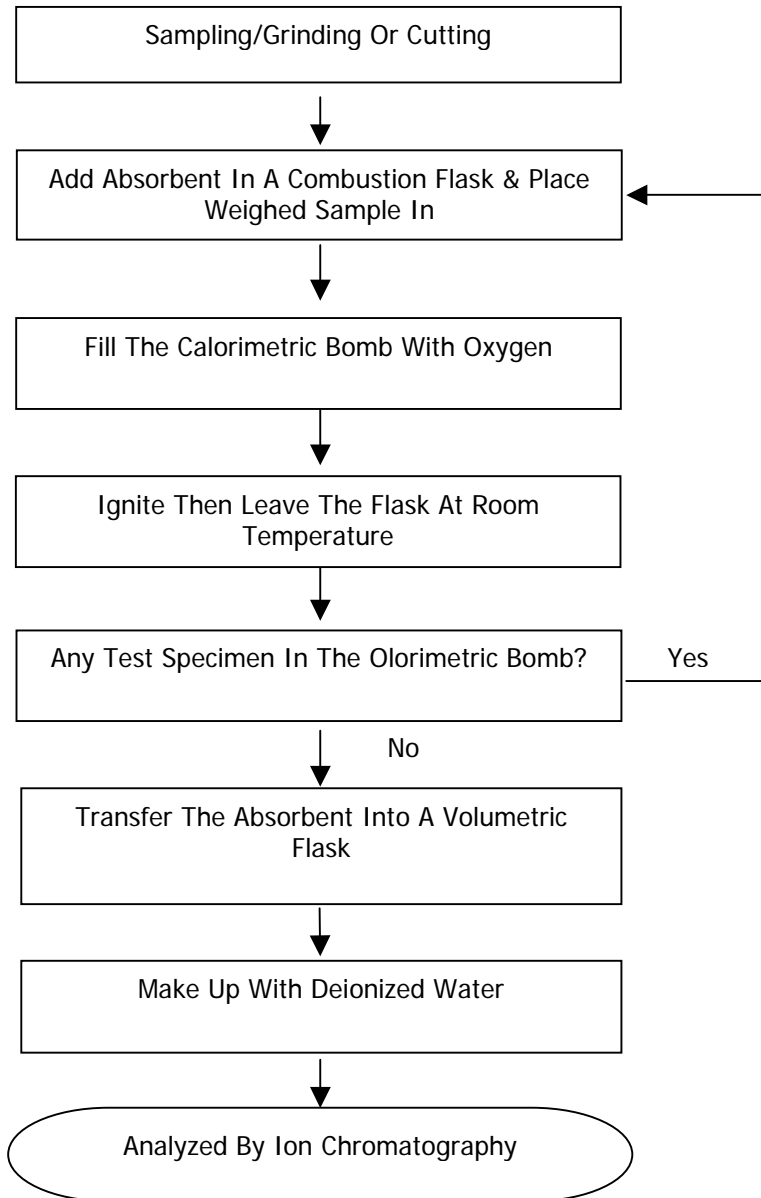
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

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Tests Conducted (As Requested By The Applicant)

Photo





Number : WUXH00006446

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Oct 28, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Dark Grey Epoxy Molding Compound.**

Item Name : Epoxy Molding Compound.  
Vendor : Chang Chun Plastics Co., Ltd.  
Component Or Part No. : EME-E110G.  
Test Item : Phthalate, HBCD.

---

Tests Conducted:  
As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager

## Tests Conducted (As Requested By The Applicant)

## 1 Phthalate Content Test

With Reference To EN14372, By Gas Chromatographic-Mass Spectrometric (GC-MSD) Analysis.

<u>Tested Compound</u>	<u>Result (%W/W)</u>	<u>Limit(%W/W)</u> (Max.)
Dibutyl Phthalate (DBP)	ND	---
Diethyl Hexyl Phthalate(DEHP)	ND	---
Benzyl Butyl Phthalate (BBP)	ND	---
Sum Of Three Phthalates	ND	0.1
Di-Iso-Nonyl Phthalate (DINP)	ND	---
Di-N-Octyl Phthalate (DNOP)	ND	---
Di-Iso-Decyl Phthalate (DIDP)	ND	---
Sum Of Three Phthalates	ND	0.1

Remark : The Above Limit Was Quoted According To Annex XVII Items 51 & 52 Of The Reach Regulation (EC) No. 1907/2006 (Formerly Known As Directive 2005/84/EC) For Phthalate Content In Toys And Children Care Articles.

Detection Limit = 0.01%(W/W)

ND = Not Detected

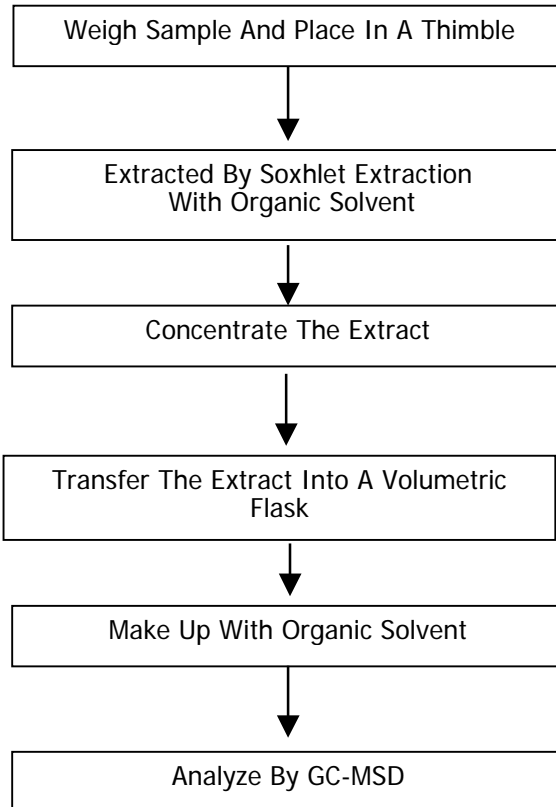
Date Sample Received : Oct 25, 2011

Testing Period : Oct 25, 2011 To Oct 27, 2011



Tests Conducted (As Requested By The Applicant)  
Measurement Flowchart:

Test For Phthalates Contents



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

---



Number : WUXH00006446

Tests Conducted (As Requested By The Applicant)

2 HBCD (Hexabromocyclododecane)

(A) Test Result Summary:

<u>Testing Item</u>	<u>Result(ppm)</u>
HBCD (Hexabromocyclododecane)	ND

Remarks:

ppm = Parts Per Million = mg/kg

ND = Not Detected

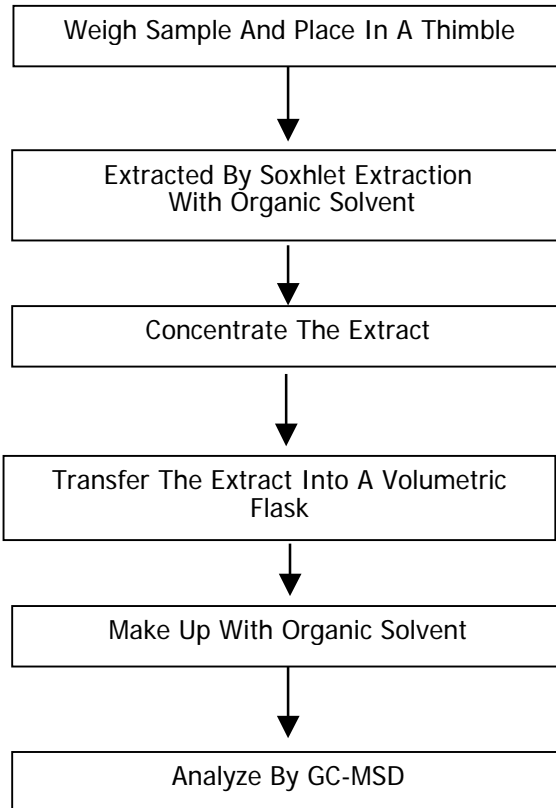
(B) Test Method :

<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
HBCD (Hexabromocyclododecane)	With Reference To US EPA 3540C, By Solvent Extraction And Determined By GC-MSD	10 ppm

Date Sample Received : Oct 25, 2011

Testing Period : Oct 25, 2011 To Oct 27, 2011

Tests Conducted (As Requested By The Applicant)  
Measurement Flowchart:  
Test For HBCD (Hexabromocyclododecane) Content



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

---

Number : WUXH00006446

Tests Conducted (As Requested By The Applicant)

Photo



TEST REPORT

Number : WUXH00005716

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Black Plastic With Silvery Metal Pin.**

Item Name : Tin Plating-Axial.  
Vendor : Zhangjiagang Liangshen Plating Co.,.  
Component Or Part No. : Pure Matte Tin.  
Test Item : Cd,Pb,Hg,CrVI,F,Cl,Br,I.

---

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.



Jessica Lu  
General Manager



TEST REPORT

Number : WUXH00005716

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
	(1)
Cadmium (Cd) Content (mg/kg)/Plating	ND
Lead (Pb) Content (mg/kg)/Plating	68
Mercury (Hg) Content (mg/kg)/Plating	ND
Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm <sup>2</sup> )	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm<sup>2</sup> = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

Tested Component:

(1) Metal Pin Plating.

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm <sup>2</sup> (In Testing Solution)

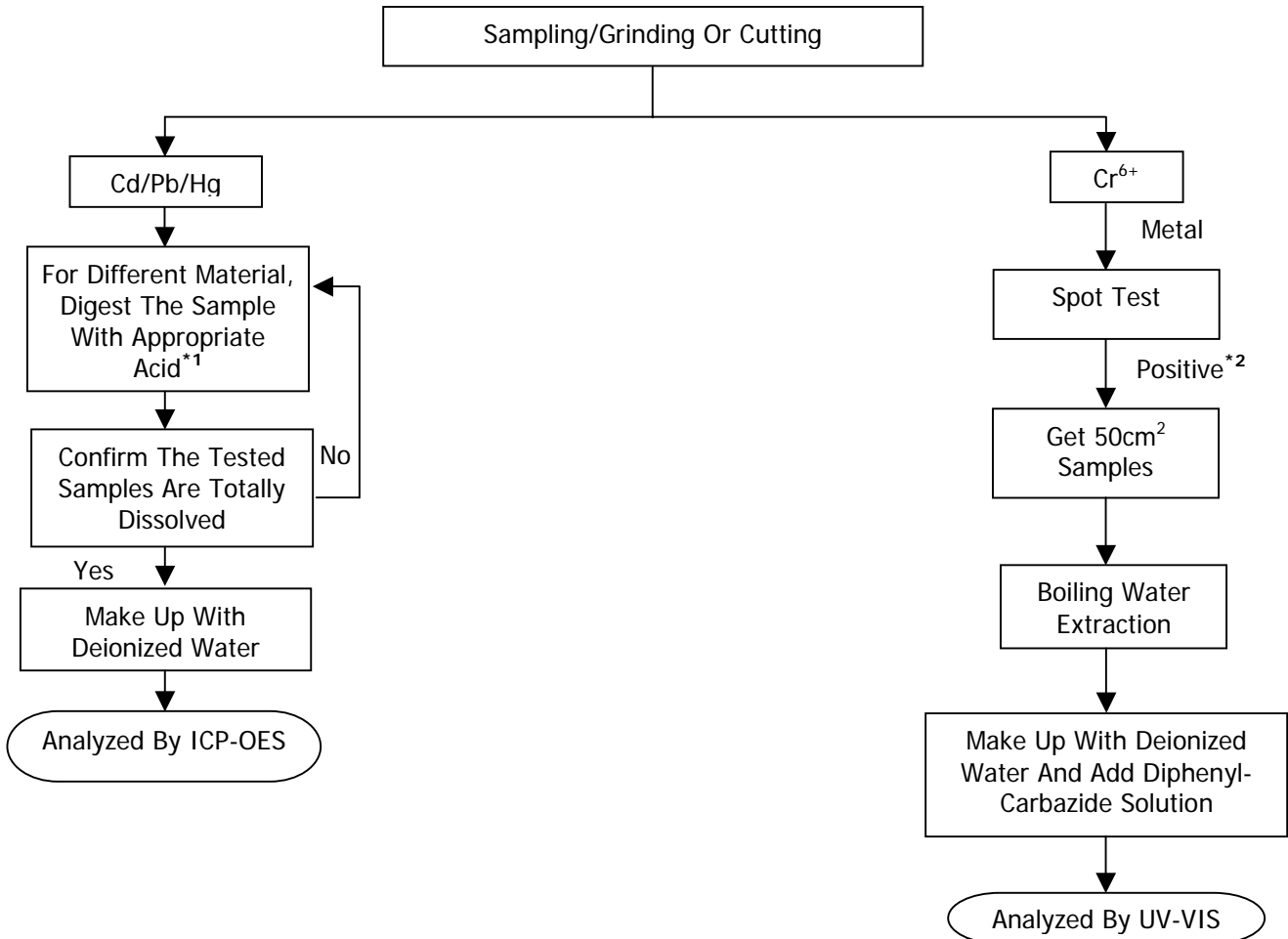
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.



TEST REPORT

Number : WUXH00005716

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

Testing Item	Result (ppm)
	(2)
Fluorine (F) Content	ND
Chlorine (Cl) Content	94
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Tested Component:

(2) Black Plastic.

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

(II) Test Method :

Testing Item	Testing Method	Reporting Limit
Halogen (F,Cl, Br,I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

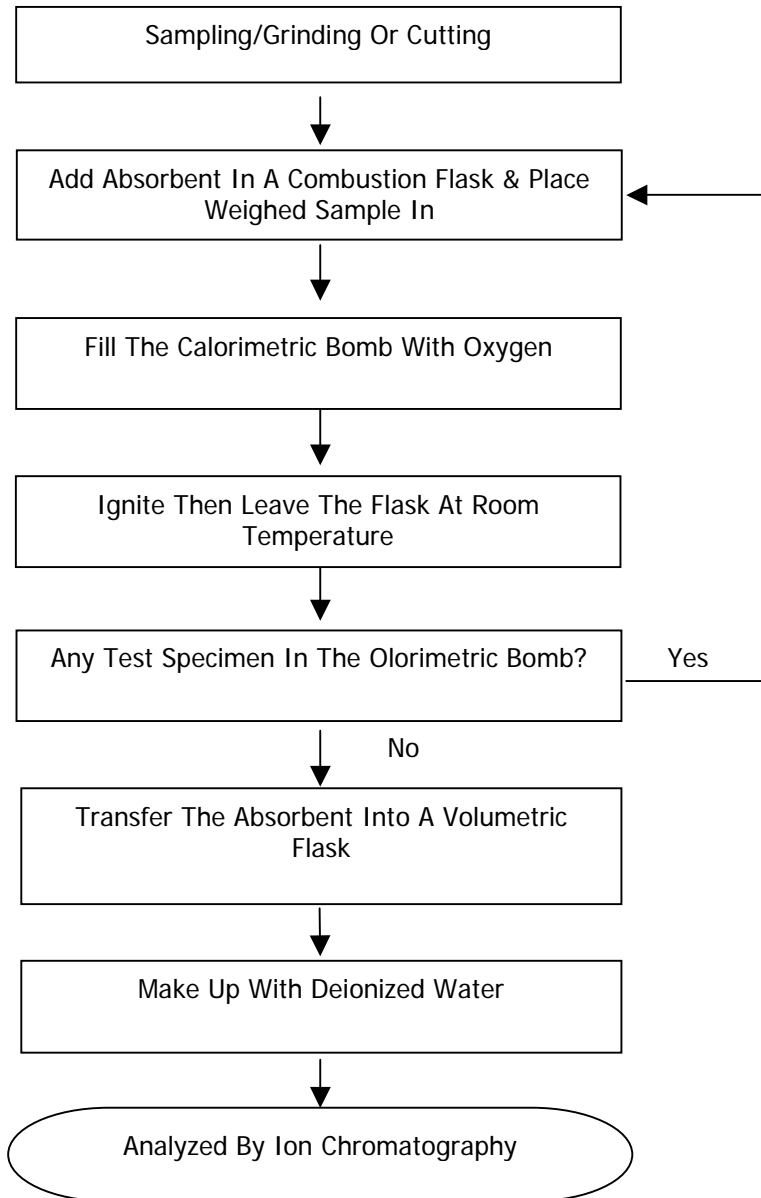
Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample



Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007

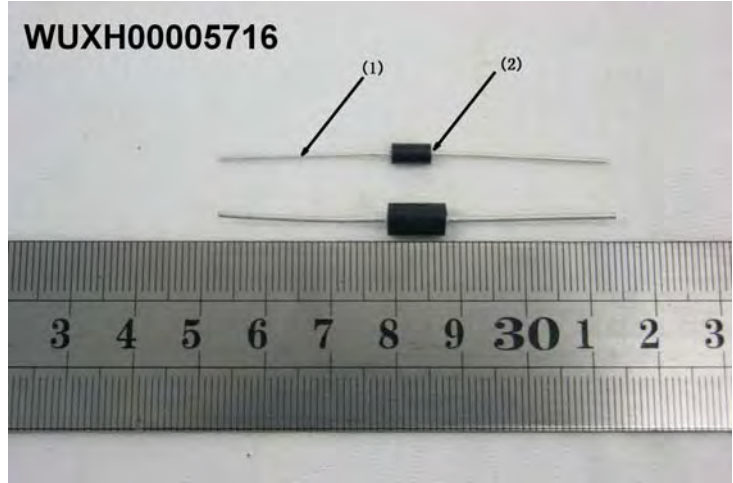


Chemist: Fred Wang/ Ally Wan Ally Wan

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Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005743

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Ink.**

Item Name : UV Ink.

Vendor : Bon Mark.

Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs,F,Cl,Br,I.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	21
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005743

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

<b>Restricted Substances</b>	<b>Limits</b>
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

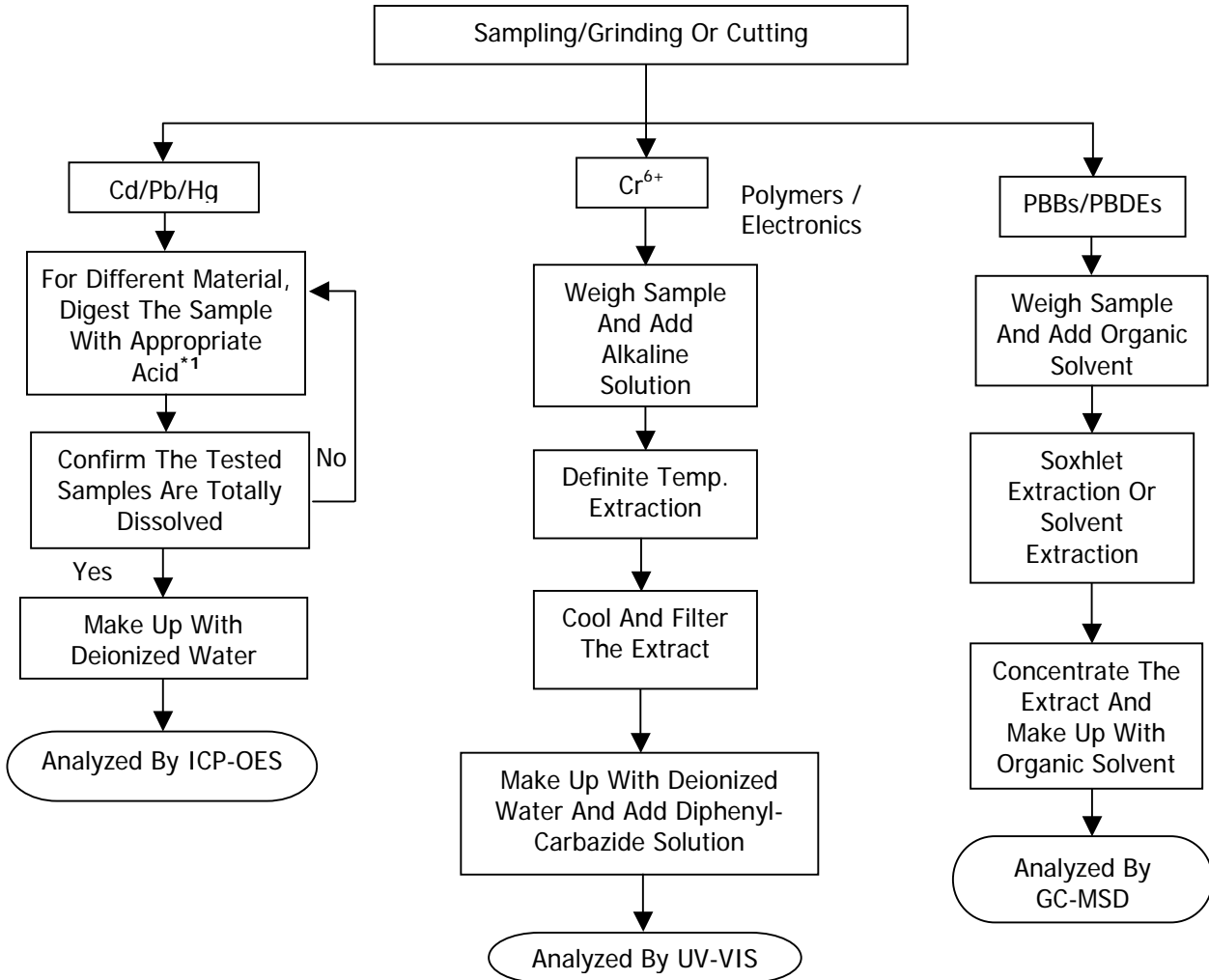
<b>Testing Item</b>	<b>Testing Method</b>	<b>Reporting Limit</b>
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:  
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

Remarks:

\*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCL, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCL, HF
Electronics	HNO <sub>3</sub> , HCL, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

2 Halogen Test  
(I) Test Result Summary :



TEST REPORT

Number : WUXH00005743

Tests Conducted (As Requested By The Applicant)

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	126
Chlorine (Cl) Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg  
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

(II) Test Method :

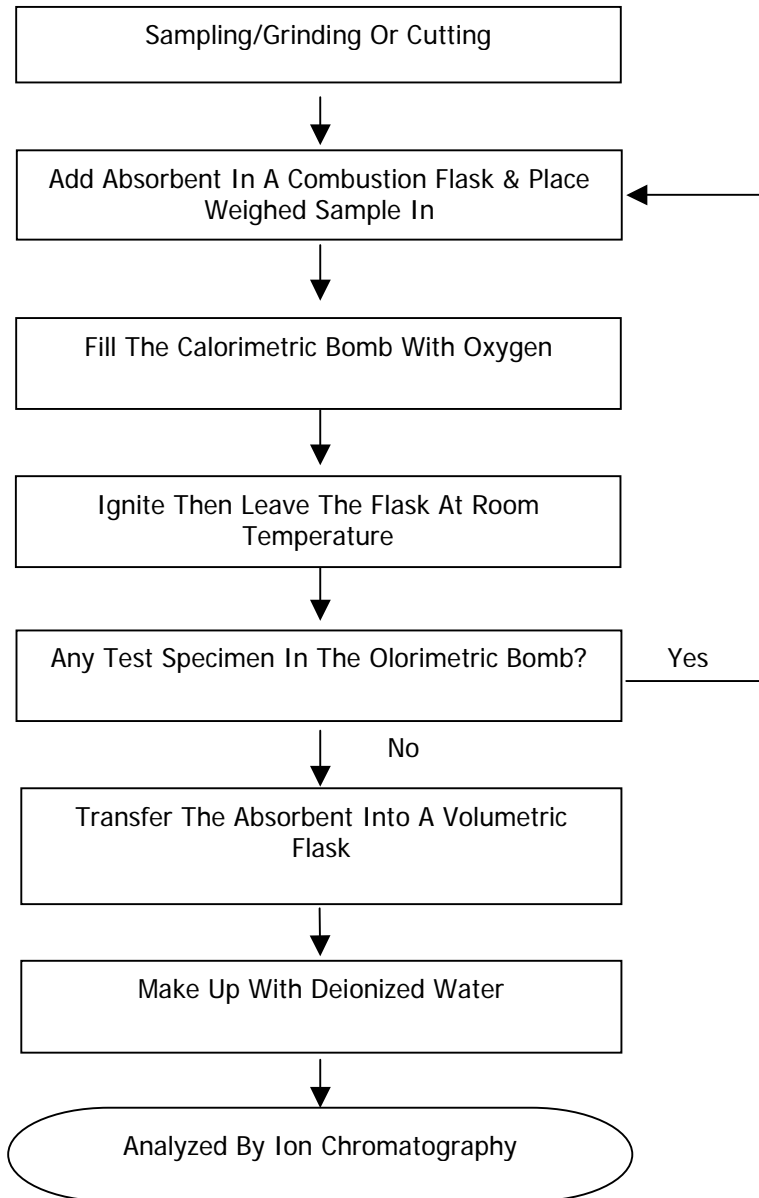
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

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Tests Conducted (As Requested By The Applicant)

Photo





Number : WUXH00006447

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.  
EAST 1#, ZHENFA 6 ROAD, SHUO FANG  
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH  
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA  
Attn : ZHANG XIAOPENG

Date : Oct 28, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Grey Ink.**

Item Name : UV Ink.  
Vendor : Bon Mark.  
Component Or Part No. : NA.  
Test Item : Phthalate, HBCD.

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Tests Conducted:  
As Requested By The Applicant, For Details Refer To Attached Pages

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Prepared And Checked By:  
For Intertek Testing Services Wuxi Ltd.

Jessica Lu  
General Manager



Number : WUXH00006447

Tests Conducted (As Requested By The Applicant)

1 Phthalate Content Test

With Reference To EN14372, By Gas Chromatographic-Mass Spectrometric (GC-MSD) Analysis.

<u>Tested Compound</u>	<u>Result (%W/W)</u>	<u>Limit(%W/W)</u> (Max.)
Dibutyl Phthalate (DBP)	ND	---
Diethyl Hexyl Phthalate(DEHP)	ND	---
Benzyl Butyl Phthalate (BBP)	ND	---
Sum Of Three Phthalates	ND	0.1
Di-Iso-Nonyl Phthalate (DINP)	ND	---
Di-N-Octyl Phthalate (DNOP)	ND	---
Di-Iso-Decyl Phthalate (DIDP)	ND	---
Sum Of Three Phthalates	ND	0.1

Remark : The Above Limit Was Quoted According To Annex XVII Items 51 & 52 Of The Reach Regulation (EC) No. 1907/2006 (Formerly Known As Directive 2005/84/EC) For Phthalate Content In Toys And Children Care Articles.

Detection Limit = 0.01%(W/W)

ND = Not Detected

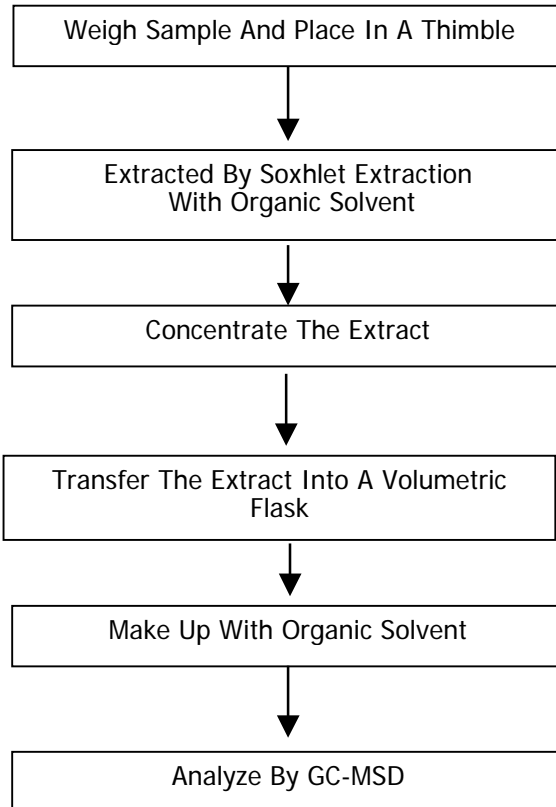
Date Sample Received : Oct 25, 2011

Testing Period : Oct 25, 2011 To Oct 27, 2011

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Tests Conducted (As Requested By The Applicant)  
Measurement Flowchart:

Test For Phthalates Contents



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

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Number : WUXH00006447

Tests Conducted (As Requested By The Applicant)

2 HBCD (Hexabromocyclododecane)

(A) Test Result Summary:

<u>Testing Item</u>	<u>Result(ppm)</u>
HBCD (Hexabromocyclododecane)	ND

Remarks:

ppm = Parts Per Million = mg/kg

ND = Not Detected

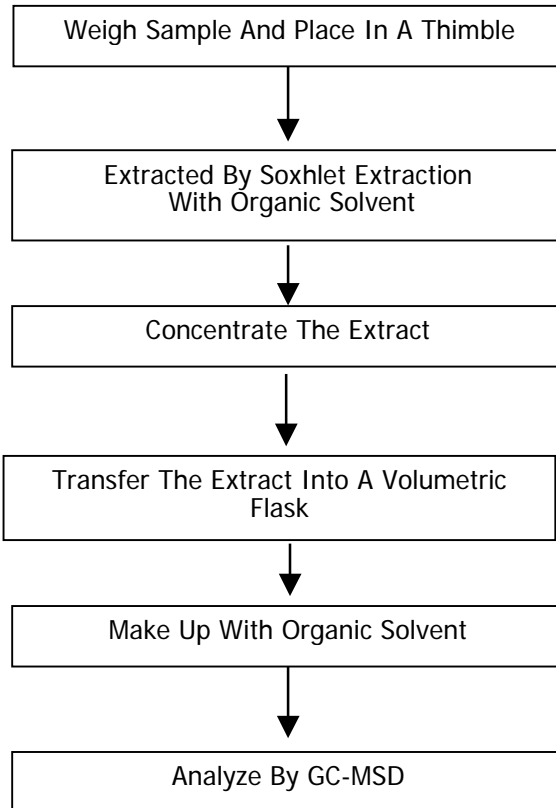
(B) Test Method :

<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
HBCD (Hexabromocyclododecane)	With Reference To US EPA 3540C, By Solvent Extraction And Determined By GC-MSD	10 ppm

Date Sample Received : Oct 25, 2011

Testing Period : Oct 25, 2011 To Oct 27, 2011

Tests Conducted (As Requested By The Applicant)  
Measurement Flowchart:  
Test For HBCD (Hexabromocyclododecane) Content



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)  
Organic (Jenny Xu/Cherry Sun)

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Number : WUXH00006447

Tests Conducted (As Requested By The Applicant)

Photo

