



ICP Test Report Certification Packet

Company Name: Littelfuse, Inc.

Product Type: Metal Oxide Varistors

Product Series: DA&DB Series RoHS Compliant models

Issue Date: Dec.24, 2010

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: *David Huang*
< DGLF Environmental, Health & Safety Engineer >

(1) Parts, sub-materials and unit parts

This document covers Metal Oxide Varistors LA series RoHS-Compliant models manufactured by Littelfuse, Inc.

Please see Table 1 for raw materials used.

(2) The ICP data on all measurable substances

Please see appropriate pages as identified in Table 1

Remarks :

Pb (lead) contained in copper alloy containing up to 4% is categorized as exempt under section 6 of the RoHS Annex.

Table 1: List of Raw Materials covered by this report

NO.	P/N	Raw Material Description	Page
1	N/A	DD Black Disc	3-7
2	N/A	Silver paste as internal electrodes	8-14
3	N/A	Solder paste	15-23
4	N/A	Terminals	24-27
5	N/A	EPOXY RESIN PCE210 4A RED	28-34
6	N/A	Industrial Casting Resin	35-41
7	N/A	Base & Lid	42-49
8	N/A	Copper Screw, separating from Base & Lid	50-52
9	N/A	Screw & Washier	53-55



TEST REPORT

NUMBER: SZHH0049776103

APPLICANT: LITTELFUSE, INC.
8755 WEST HIGGINS ROAD SUITE 500
CHICAGO IL 60631 USA

DATE: Jun 19, 2010

ATTN: KRISTEEN BACILA/ARSENIO CESISTA JR.

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **DD BLACK DISC.**

TESTED COMPONENT : GREY SOLID.

PART DESCRIPTION : DD BLACK DISC.

DATE SAMPLE RECEIVED : JUN 12, 2010.

DATE TEST STARTED : JUN 12, 2010.



TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.



KARBON M.Y. WU
GENERAL MANAGER

**TEST REPORT**

NUMBER: SZHH0049776103

TESTS CONDUCTED

RoHS CHEMICAL TEST

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI)(Cr ⁶⁺) CONTENT (mg/kg)	15
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)	
MONOBROMOBIPHENYL (MonoBB)	ND (<5)
DIBROMOBIPHENYL (DiBB)	ND (<5)
TRIBROMOBIPHENYL (TriBB)	ND (<5)
TETRABROMOBIPHENYL (TetraBB)	ND (<5)
PENTABROMOBIPHENYL (PentaBB)	ND (<5)
HEXABROMOBIPHENYL (HexaBB)	ND (<5)
HEPTABROMOBIPHENYL (HeptaBB)	ND (<5)
OCTABROMOBIPHENYL (OctaBB)	ND (<5)
NONABROMOBIPHENYL (NonaBB)	ND (<5)
DECABROMOBIPHENYL (DecaBB)	ND (<5)
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)	
MONOBROMODIPHENYL ETHER (MonoBDE)	ND (<5)
DIBROMODIPHENYL ETHER (DiBDE)	ND (<5)
TRIBROMODIPHENYL ETHER (TriBDE)	ND (<5)
TETRABROMODIPHENYL ETHER (TetraBDE)	ND (<5)
PENTABROMODIPHENYL ETHER (PentaBDE)	ND (<5)
HEXABROMODIPHENYL ETHER (HexaBDE)	ND (<5)
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND (<5)
OCTABROMODIPHENYL ETHER (OctaBDE)	ND (<5)
NONABROMODIPHENYL ETHER (NonaBDE)	ND (<5)
DECABROMODIPHENYL ETHER (DecaBDE)	ND (<5)

CHEMIST: LV LINNA

mg/kg = MILLIGRAM PER KILOGRAM = ppm

< = LESS THAN

ND = NOT DETECTED

**TEST REPORT**

NUMBER: SZHH0049776103

TESTS CONDUCTED

(B) RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000 ppm)

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 ⁶⁺) CONTENT	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/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY	5 mg/kg

DATE SAMPLE RECEIVED : JUN 12, 2010

TESTING PERIOD : JUN 12, 2010 TO JUN 17, 2010

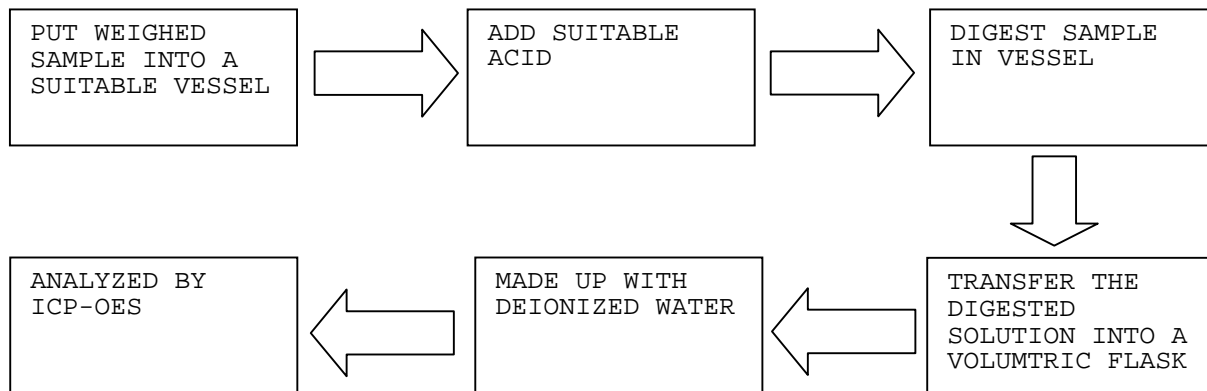
TEST REPORT

NUMBER: SZHH0049776103

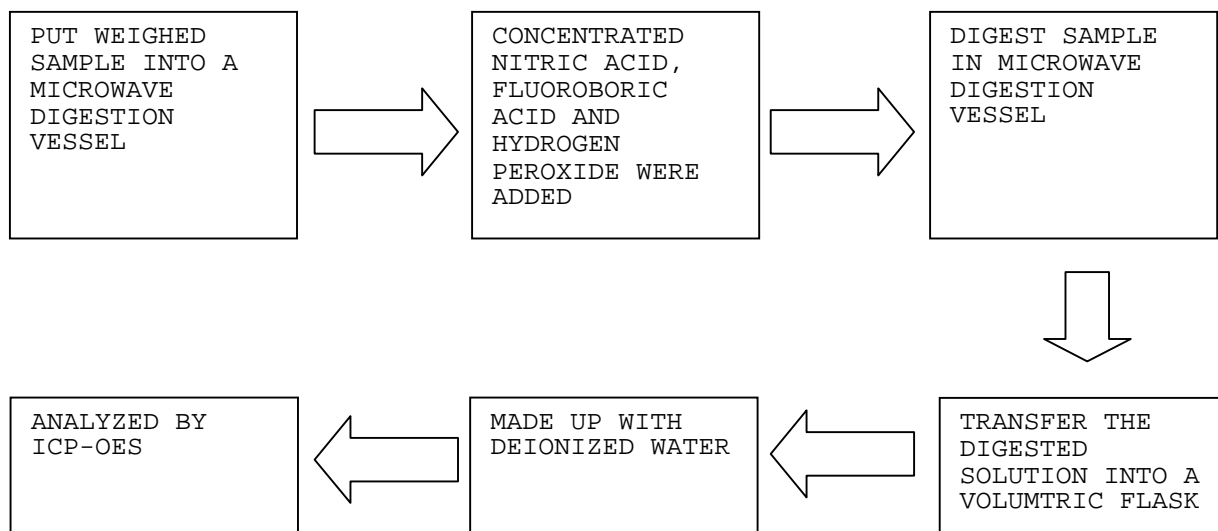
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS



2. TEST FOR Hg CONTENT

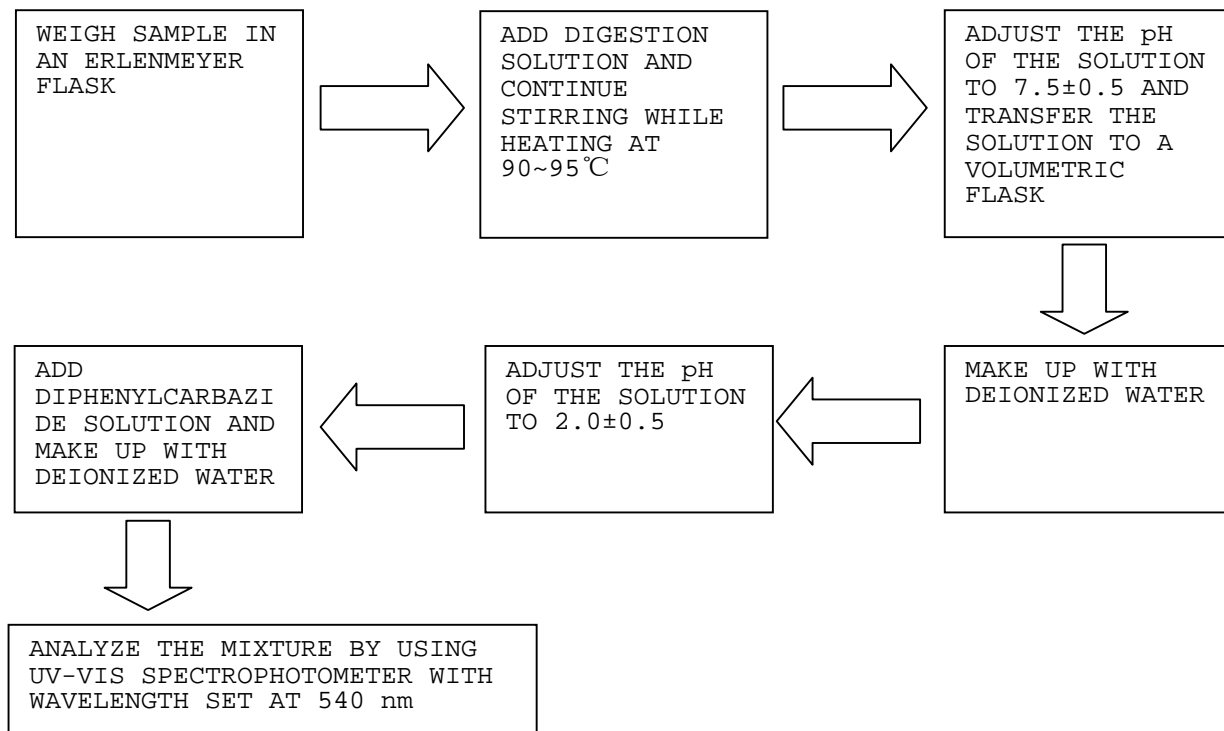


TEST REPORT

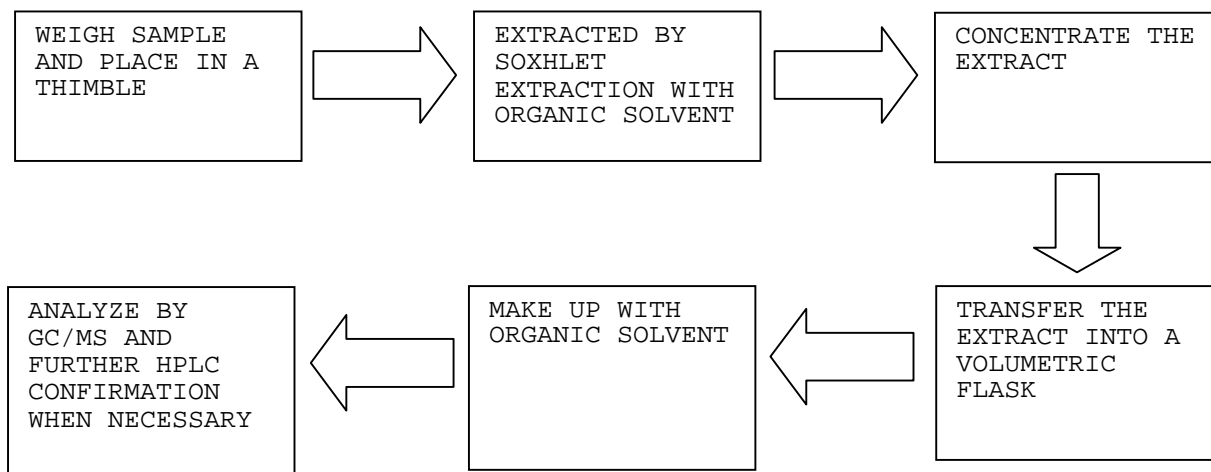
NUMBER: SZHH0049776103

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (ALKALINE DIGESTION)



4. TEST FOR PBBs/PBDEs CONTENTS



END OF REPORT

測試報告 Test Report

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新日本化金株式會社
SHIN-NIHON KAKIN CO., LTD.

東京都板橋區宮本町33番7號

33-7, MIYAMOTO-CHO, ITABASHI-KU, TOKYO, JAPAN



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description)	: 銀膏 (SILVER PASTE)
樣品型號(Style/Item No.)	: SP-A6PL
材料批號(Lot No.)	: 00603
收件日期(Sample Receiving Date)	: 2010/06/11
測試期間(Testing Period)	: 2010/06/11 TO 2010/06/21

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).


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

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測試結果(Test Results)

測試部位(PART NAME) NO.1 : 灰綠色膏狀 (GRAY-GREEN PASTE)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	參考IEC 62321: 2008方法, 以UV-VIS檢測。 / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 014762-94-8)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析。 / With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)			50	n.d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 010097-32-2)			50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 014362-44-8)			50	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result) NO.1
多溴聯苯總和 / Sum of PBBs	mg/kg	參考 IEC 62321: 2008 方法, 以氣相層析儀/質譜儀檢測. / With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.
多溴聯苯醚總和 / Sum of PBDEs			-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.

備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)

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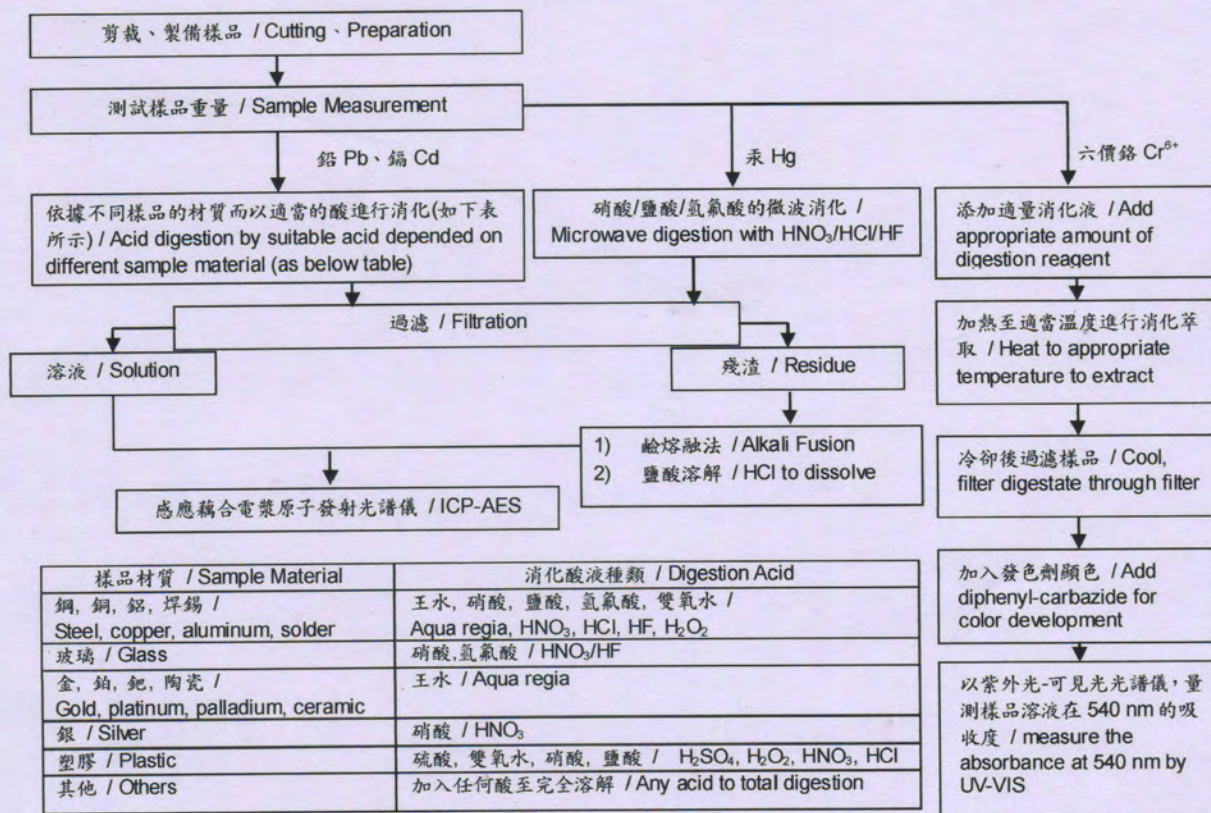
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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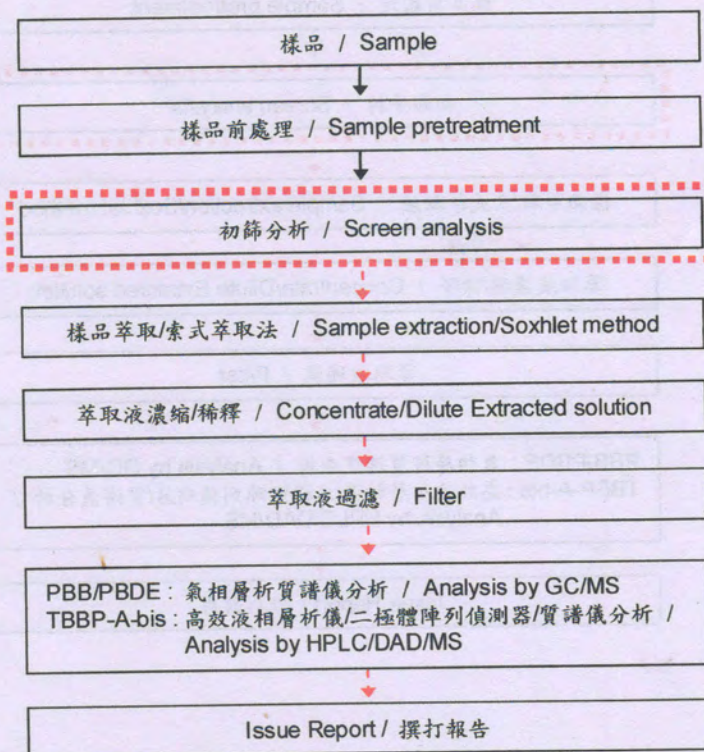
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分析流程圖 / Analytical flow chart

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
2) 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang
■ 測試項目(Test Items): 多溴聯苯/多溴聯苯醚, 四溴雙酚-A-雙 / PBB/PBDE, TBBP-A-bis

初次測試程序 / First testing process → 選擇性篩檢程序 / Optional screen process 確認程序 / Confirmation process →



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33-7, MIYAMOTO-CHO, ITABASHI-KU, TOKYO, JAPAN



鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員：陳恩臻 / Name of the person who made measurement: Rita Chen
- 2) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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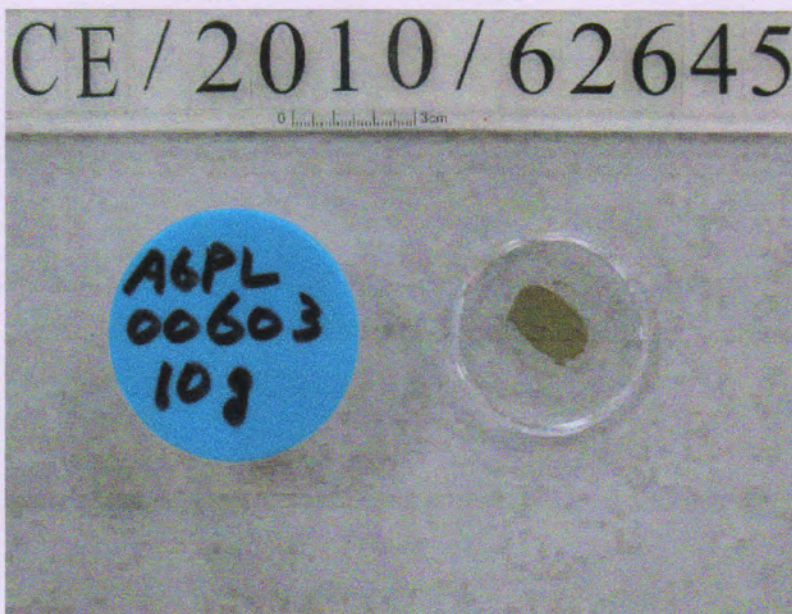
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** 報告結尾(End of Report) **

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Test Report

No. CANEC1000805811

Date: 15 Mar 2010

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DONGGUAN QI HANG XI YE MANUFACTURING CO.,LTD
NO.1 INDUSTRIAL PARK,XIAGANG,CHANGAN TOWN,DONGGUAN CITY
CHINA

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

LEAD-FREE SOLDER PASTE

SGS Job No. : 12409086 - GZ
Client Ref. Information : MIXTURE OF QH#LF96, QH#LF97, QH#LF98, QH#LF658, QH#LF601,
QH#LT658, QH#LT601, QH#LT658C, QH#LF96H, QH#LF97H,
QH#LF98H, QH#LF658H, QH#LF601H, QH#LT658H, QH#LT601H,
QH#LT658CH
Supplier : DONGGUAN QI HANG XI YE MANUFACTURING CO.,LTD
SGS Internal Reference No. : 13.11
Date of Sample Received : 09 Mar 2010
Testing Period : 09 Mar 2010 - 15 Mar 2010
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).
Conclusion : 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
Sr. Engineer

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Test Report

No. CANEC1000805811

Date: 15 Mar 2010

Page 2 of 5

Test Results:

ID for specimen 1 : CAN10-008058.011
Description for specimen 1 : Grey paste

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
Lead (Pb)	mg/kg	IEC 62321:2008, ICP-OES	66	2	1000
Mercury (Hg)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321:2008, UV-Vis	N.D.	2	1000
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	

Note:

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

Remark : The result(s) shown is/are of the total weight of dried sample.

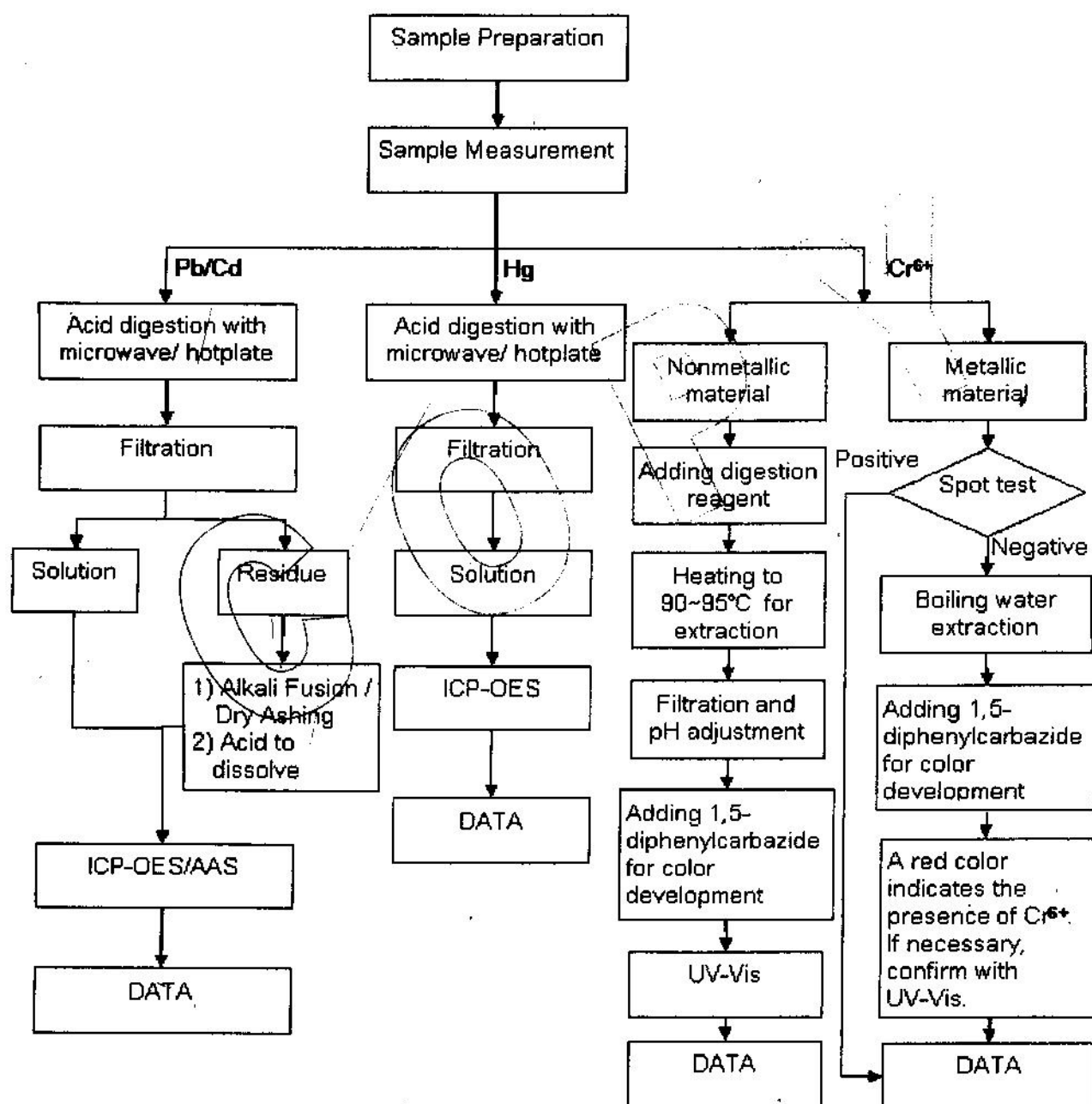
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ATTACHMENTS

Testing Flow Chart

- 1) Name of the person who made measurement: Bella Wang
- 2) Name of the person in charge of measurement: Adams Yu

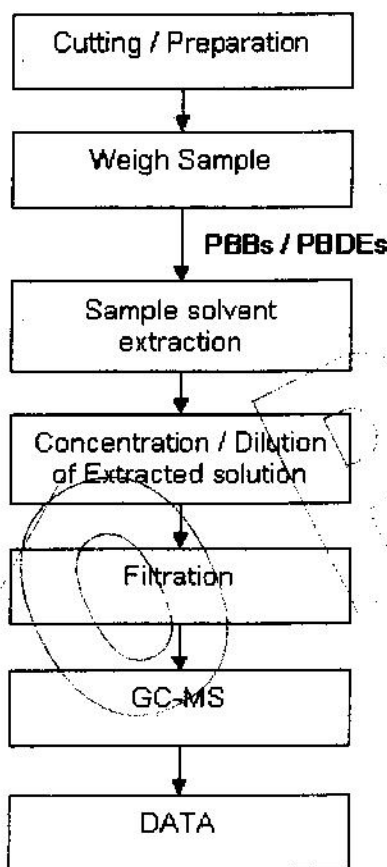


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Testing Flow Chart

- 1) Name of the person who made measurement: Tina Zhao
- 2) Name of the person in charge of measurement: Ryan Yang



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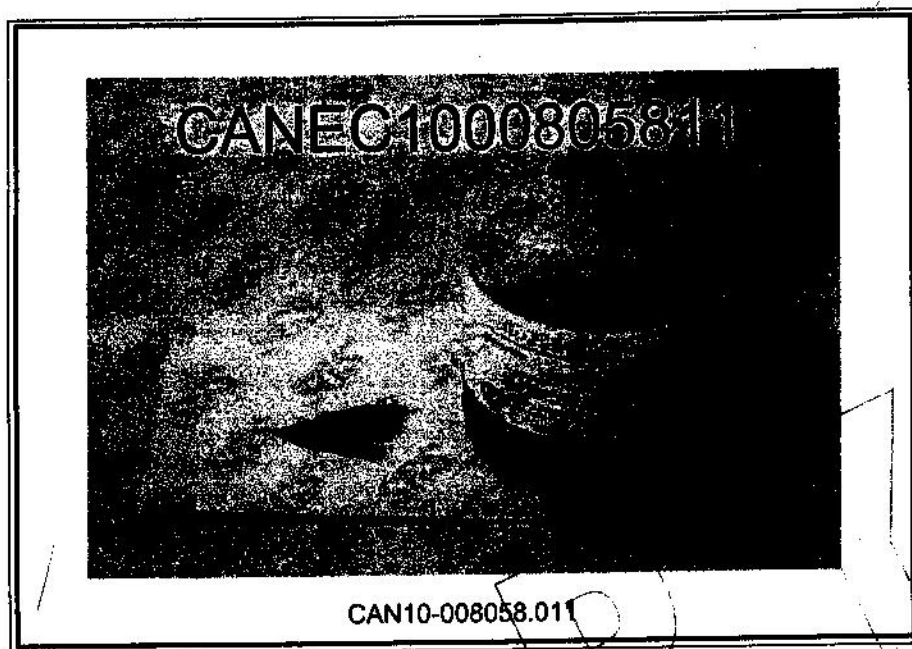
SGS Standards Technical Services Co., Ltd.
Guangzhou Branch

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GZCM 3716449

Sample photo:



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*** End of Report ***

GO

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GZCM 3716450



Test Report

No. CANEC1000805812

Date: 15 Mar 2010

Page 1 of 4

DONGGUAN QI HANG XI YE MANUFACTURING CO.,LTD
NO.1 INDUSTRIAL PARK,XIAGANG,CHANGAN TOWN,DONGGUAN CITY
CHINA

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

LEAD-FREE SOLDER PASTE

SGS Job No. : 12409086 - GZ
Client Ref. Information : MIXTURE OF QH#LF96H, QH#LF97H, QH#LF98H, QH#LF658H,
QH#LF601H, QH#LT658H, QH#LT601H, QH#LT658CH
Supplier : DONGGUAN QI HANG XI YE MANUFACTURING CO.,LTD
SGS Internal Reference No. : 13.12
Date of Sample Received : 09 Mar 2010
Testing Period : 09 Mar 2010 - 15 Mar 2010
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).

Signed for and on behalf of
SGS-CSTC Ltd.


Manson Yang
Sr. Engineer

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Guangzhou Chemical Laboratory

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GZCM 3716461

Member of the SGS Group (SGS SA)



Test Report

No. CANEC1000805812

Date: 15 Mar 2010

Page 2 of 4

Test Results:

ID for specimen 1 : CAN10-008058.012
Description for specimen 1 : Grey paste

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

Note:

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

Remark : The result(s) shown is/are of the total weight of wet sample.

GO P

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Guangzhou Testing Center Chemical Laboratory

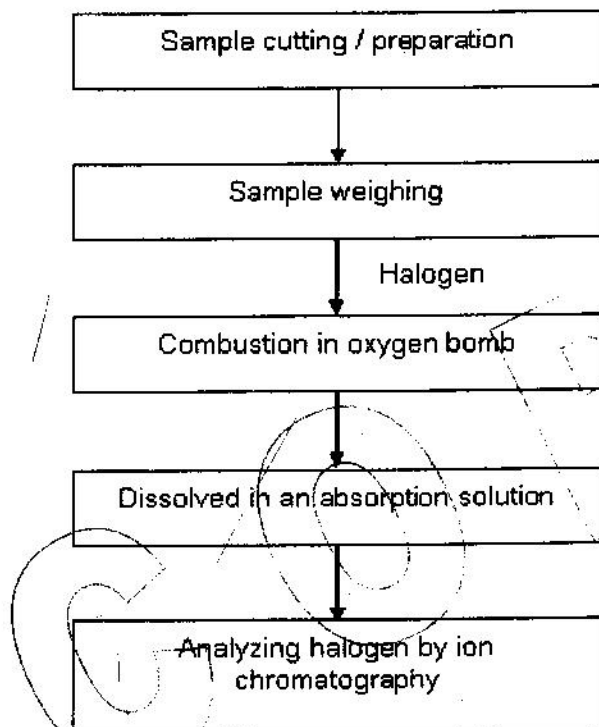
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GZCM 3716452

ATTACHMENTS

Testing Flow Chart

- 1) Name of the person who made measurement: Sawen, Chen
- 2) Name of the person in charge of measurement: Michael Tso



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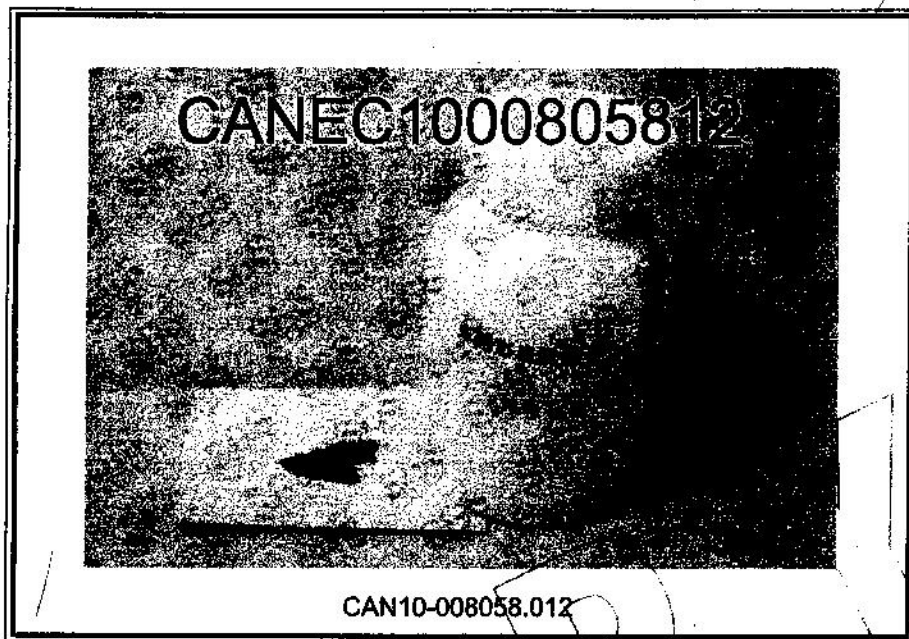
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GZCM 3716453

Sample photo:



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Guangzhou Branch / Chemical Laboratory

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GZCM 3716454



TEST REPORT

NUMBER: SZHH0051717502

APPLICANT: LITTELFUSE, INC.
8755 WEST HIGGINS ROAD SUITE 500
CHICAGO IL 60631 USA

DATE: Aug 17, 2010

ATTN: KRISTEEN BACILA/ARSENIO CESISTA JR.

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **SILVER-GREY METAL.**
PART DESCRIPTION : TERMINALS.
DATE SAMPLE RECEIVED : AUG 11, 2010.
DATE TEST STARTED : AUG 11, 2010.



TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.




BEN N.L. LIN
GENERAL MANAGER

**TEST REPORT**

NUMBER: SZHH0051717502

TESTS CONDUCTED

RoHS CHEMICAL TEST

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND(<2)
LEAD (Pb) CONTENT (mg/kg)	ND(<2)
MERCURY (Hg) CONTENT (mg/kg)	ND(<2)
CHROMIUM (VI)(Cr ⁶⁺) RESULT (BY BOILING WATER EXTRACTION ON METAL)(mg/kg WITH 50cm ²)	NEGATIVE (<0.02)

CHEMIST: LV LINNA

mg/kg = MILLIGRAM PER KILOGRAM = ppm

mg/kg WITH 50cm² = MILLIGRAM PER KILOGRAM WITH 50 SQUARE CENTIMETRE

< = LESS THAN

ND = NOT DETECTED

POSITIVE = A POSITIVE TEST RESULT INDICATED THE PRESENCE OF Cr(VI) AT THE TIME OF TESTING, EQUAL TO OR GREATER THAN THRESHOLD OF 1 mg/kg FOR SPOT TEST PROCEDURE OR 0.02 mg/kg FOR BOILING-WATER-EXTRACTION PROCEDURES WITH A SAMPLE SURFACE AREA OF 50cm² USED. HOWEVER, IT SHALL NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE AND SHOULD NOT BE USED AS A METHOD DETECTION LIMIT FOR THIS QUALITATIVE TEST.

NEGATIVE = A NEGATIVE TEST RESULT INDICATED ABOVE POSITIVE OBSERVATION WAS NOT FOUND AT THE TIME OF TESTING. WHEN THE SPOT-TEST SHOWED A NEGATIVE RESULT, THE BOILING-WATER-EXTRACTION PROCEDURE SHALL BE USED TO VERIFY THE RESULT.

(B) RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)

THE ABOVE LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

TEST REPORT

NUMBER: SZHH0051717502

TESTS CONDUCTED

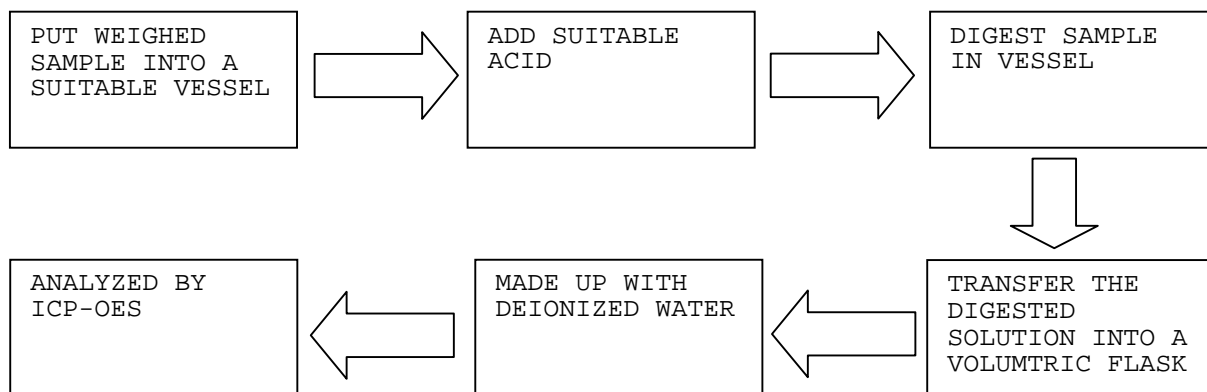
(C) TEST METHOD:

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 ⁶⁺) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008, BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	POSITIVE/ NEGATIVE (THRESHOLD OF 0.02mg/kg with 50cm ²)

DATE SAMPLE RECEIVED: AUG 11, 2010
TESTING PERIOD: AUG 11, 2010 TO AUG 12, 2010

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS

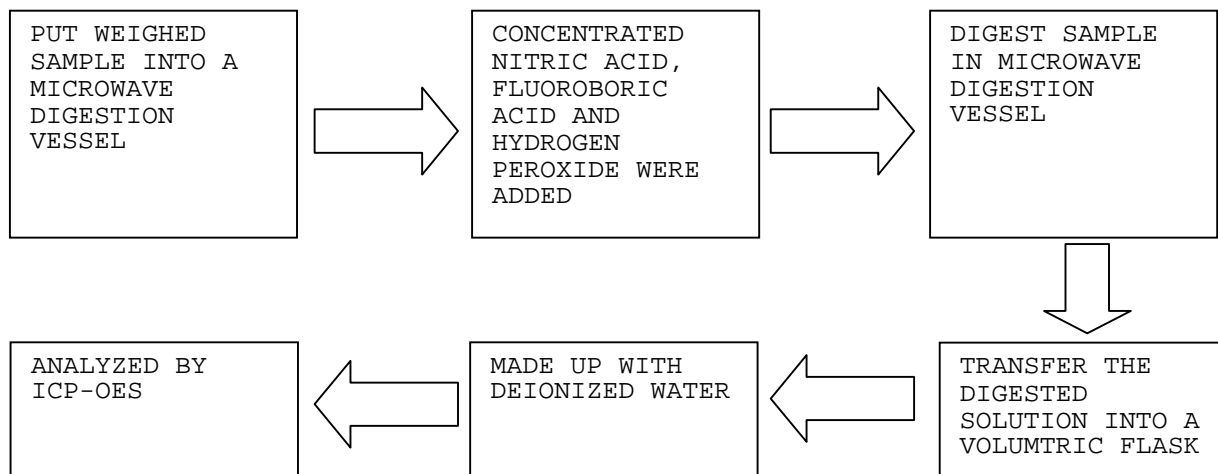


TEST REPORT

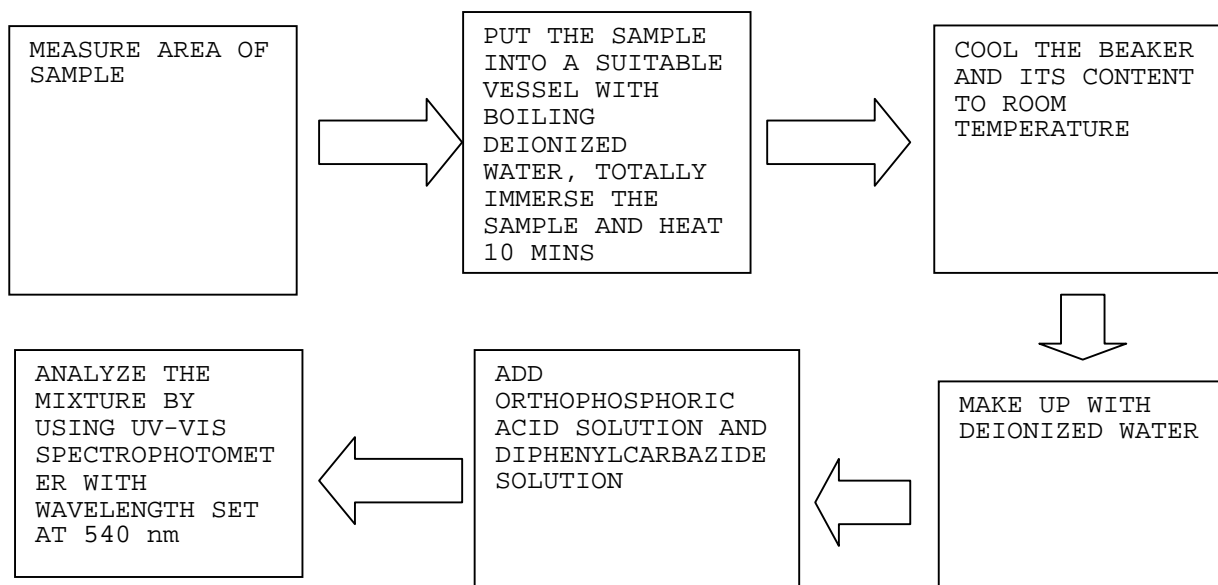
NUMBER: SZHH0051717502

TESTS CONDUCTED

2. TEST FOR Hg CONTENT



3. TEST FOR CHROMIUM(VI) (Cr^{6+}) CONTENT (BOILING WATER EXTRACTION)



END OF REPORT



TEST REPORT

NUMBER: SZHH0049776601

APPLICANT: LITTELFUSE, INC.
8755 WEST HIGGINS ROAD SUITE 500
CHICAGO IL 60631 USA

DATE: Jun 24, 2010

ATTN: KRISTEEN BACILA/ARSENIO CESISTA JR.

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLES SAID TO BE **RED POWDER**.
PART DESCRIPTION : EPOXY RESIN PCE210 4A RED.
PART NO. : MS044.
DATE SAMPLE RECEIVED : JUN 12, 2010.
DATE TEST STARTED : JUN 12, 2010.



TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.



KARBON M.Y. WU
GENERAL MANAGER

**TEST REPORT**

NUMBER: SZHH0049776601

TESTS CONDUCTED

1 RoHS CHEMICAL TEST

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI)(Cr ⁶⁺) CONTENT (mg/kg)	ND (<1)
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)	
MONOBROMOBIPHENYL (MonoBB)	ND (<5)
DIBROMOBIPHENYL (DiBB)	ND (<5)
TRIBROMOBIPHENYL (TriBB)	ND (<5)
TETRABROMOBIPHENYL (TetraBB)	ND (<5)
PENTABROMOBIPHENYL (PentaBB)	ND (<5)
HEXABROMOBIPHENYL (HexaBB)	ND (<5)
HEPTABROMOBIPHENYL (HeptaBB)	ND (<5)
OCTABROMOBIPHENYL (OctaBB)	ND (<5)
NONABROMOBIPHENYL (NonaBB)	ND (<5)
DECABROMOBIPHENYL (DecaBB)	ND (<5)
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)	
MONOBROMODIPHENYL ETHER (MonoBDE)	ND (<5)
DIBROMODIPHENYL ETHER (DiBDE)	ND (<5)
TRIBROMODIPHENYL ETHER (TriBDE)	ND (<5)
TETRABROMODIPHENYL ETHER (TetraBDE)	ND (<5)
PENTABROMODIPHENYL ETHER (PentaBDE)	ND (<5)
HEXABROMODIPHENYL ETHER (HexaBDE)	ND (<5)
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND (<5)
OCTABROMODIPHENYL ETHER (OctaBDE)	ND (<5)
NONABROMODIPHENYL ETHER (NonaBDE)	ND (<5)
DECABROMODIPHENYL ETHER (DecaBDE)	ND (<5)

CHEMIST: LV LINNA

mg/kg = MILLIGRAM PER KILOGRAM = ppm

< = LESS THAN

ND = NOT DETECTED

**TEST REPORT**

NUMBER: SZHH0049776601

TESTS CONDUCTED

(B) RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000 ppm)

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 ⁶⁺) CONTENT	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/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY	5 mg/kg

DATE SAMPLE RECEIVED : JUN 12, 2010

TESTING PERIOD : JUN 12, 2010 TO JUN 17, 2010 & JUN 22, 2010 TO JUN 24, 2010

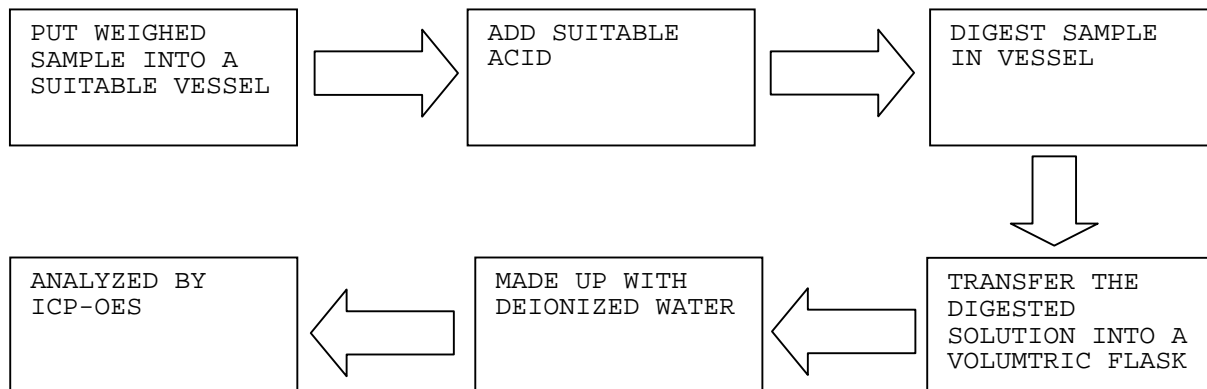
TEST REPORT

NUMBER: SZHH0049776601

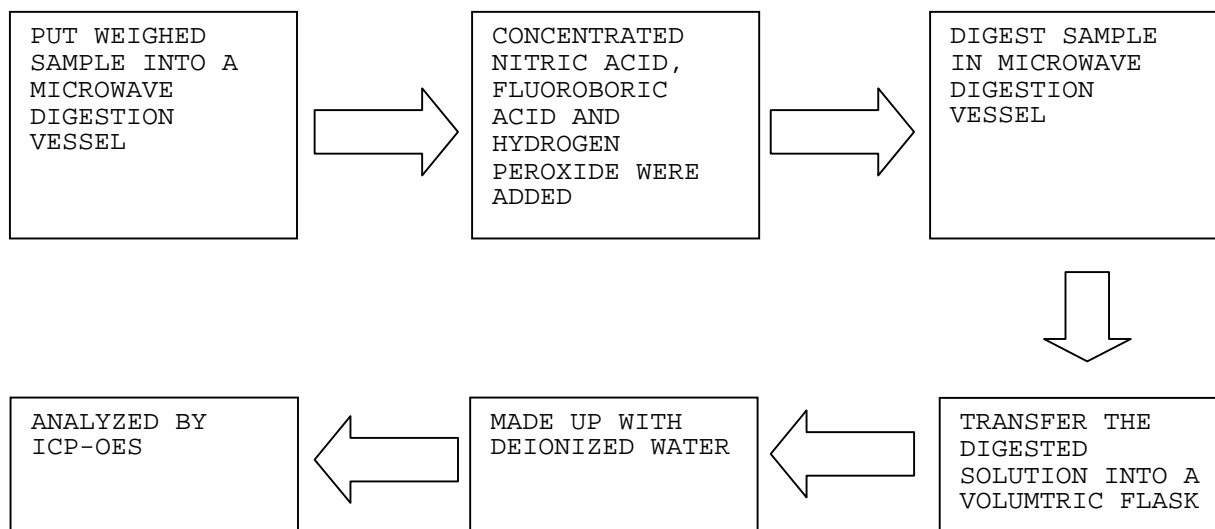
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS



2. TEST FOR Hg CONTENT

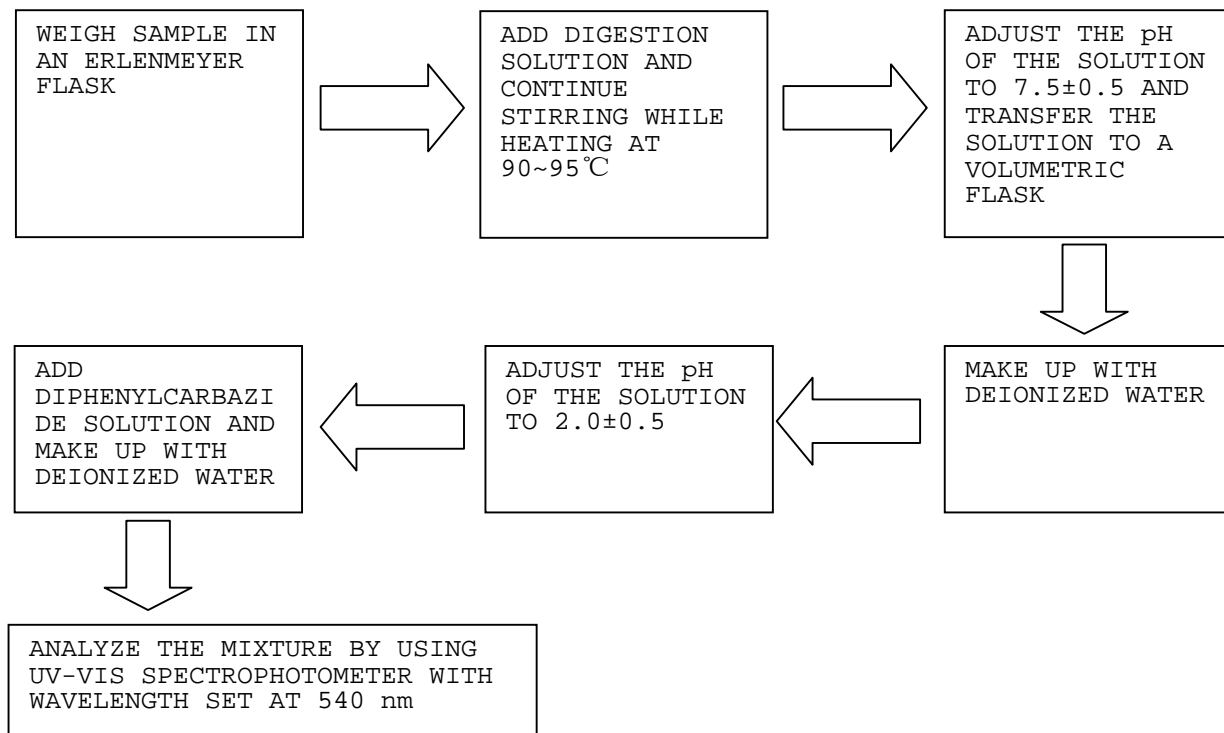


TEST REPORT

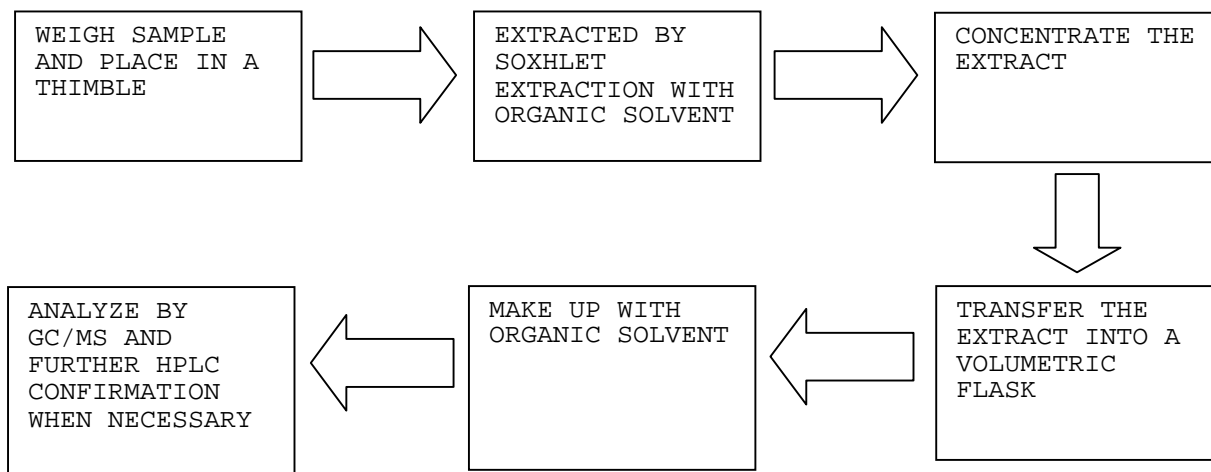
NUMBER: SZHH0049776601

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (ALKALINE DIGESTION)



4. TEST FOR PBBs/PBDEs CONTENTS



**TEST REPORT**

NUMBER: SZHH0049776601

TESTS CONDUCTED

2 (I) TEST RESULT SUMMARY :

HALOGEN CONTENT :

<u>TESTING ITEM</u>	<u>RESULT (ppm)</u>
FLUORINE (F) CONTENT	242
CHLORINE (Cl) CONTENT	900
BROMINE (Br) CONTENT	100000
IODINE (I) CONTENT	ND

REMARKS : ppm = PARTS PER MILLION

ND = NOT DETECTED

THE RELATED EXPANDED UNCERTAINTY (U₉₅) OF THE CHLORINE TEST IS 16%.

SINCE THE BROMINE CONTENT OF THE SUBMITTED SAMPLE EXCEED THE NORMAL WORKABLE RANGLE OF IC DETERMINATION. THE RESULT SHOULD BE FOR REFERENCE ONLY.

(II) TEST METHOD :

<u>TESTING ITEM</u>	<u>TESTING METHOD</u>	<u>REPORTING LIMIT</u>
HALOGEN (F, Cl, Br, I) CONTENT	WITH REFERENCE TO BS EN 14582:2007 BY CALORIMETRIC BOMB AND DETERMINED BY ION CHROMATOGRAPHY	50 ppm

REMARK : REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE

DATE SAMPLE RECEIVED : JUN 12, 2010

TESTING PERIOD : JUN 12, 2010 TO JUN 17, 2010

TEST REPORT

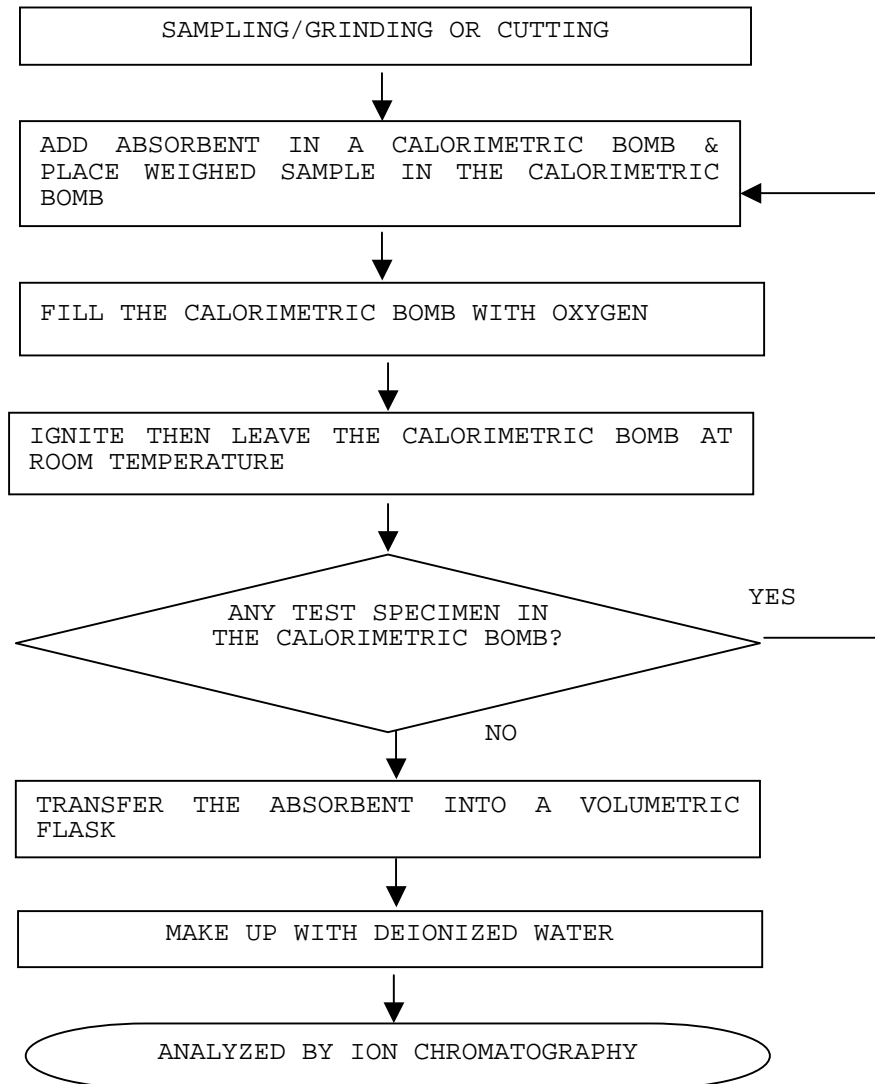
NUMBER: SZHH0049776601

TESTS CONDUCTED

(III) MEASUREMENT FLOWCHART:

TEST FOR HALOGEN CONTENT

REFERENCE METHOD: BS EN 14582:2007



END OF REPORT

TEST REPORT

NUMBER: SZHH0051716902

APPLICANT: LITTELFUSE, INC.
8755 WEST HIGGINS ROAD SUITE 500
CHICAGO IL 60631 USA

DATE: Aug 17, 2010

ATTN: KRISTEEN BACILA/ARSENIO CESISTA JR.

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **BLACK SOLID**.
PART DESCRIPTION : INDUSTRIAL CASTING RESIN.
DATE SAMPLE RECEIVED : AUG 11, 2010.
DATE TEST STARTED : AUG 11, 2010.



TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.




BEN N.L. LIN
GENERAL MANAGER

**TEST REPORT**

NUMBER: SZHH0051716902

TESTS CONDUCTED

1 RoHS CHEMICAL TEST

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI)(Cr ⁶⁺) CONTENT (mg/kg)	ND (<1)
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)	
MONOBROMOBIPHENYL (MonoBB)	ND (<5)
DIBROMOBIPHENYL (DiBB)	ND (<5)
TRIBROMOBIPHENYL (TriBB)	ND (<5)
TETRABROMOBIPHENYL (TetraBB)	ND (<5)
PENTABROMOBIPHENYL (PentaBB)	ND (<5)
HEXABROMOBIPHENYL (HexaBB)	ND (<5)
HEPTABROMOBIPHENYL (HeptaBB)	ND (<5)
OCTABROMOBIPHENYL (OctaBB)	ND (<5)
NONABROMOBIPHENYL (NonaBB)	ND (<5)
DECABROMOBIPHENYL (DecaBB)	ND (<5)
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)	
MONOBROMODIPHENYL ETHER (MonoBDE)	ND (<5)
DIBROMODIPHENYL ETHER (DiBDE)	ND (<5)
TRIBROMODIPHENYL ETHER (TriBDE)	ND (<5)
TETRABROMODIPHENYL ETHER (TetraBDE)	ND (<5)
PENTABROMODIPHENYL ETHER (PentaBDE)	ND (<5)
HEXABROMODIPHENYL ETHER (HexaBDE)	ND (<5)
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND (<5)
OCTABROMODIPHENYL ETHER (OctaBDE)	ND (<5)
NONABROMODIPHENYL ETHER (NonaBDE)	ND (<5)
DECABROMODIPHENYL ETHER (DecaBDE)	ND (<5)

CHEMIST: LV LINNA

mg/kg = MILLIGRAM PER KILOGRAM = ppm

< = LESS THAN

ND = NOT DETECTED

**TEST REPORT**

NUMBER: SZHH0051716902

TESTS CONDUCTED

(B) RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000 ppm)

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 ⁶⁺) CONTENT	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/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY	5 mg/kg

DATE SAMPLE RECEIVED : AUG 11, 2010

TESTING PERIOD : AUG 11, 2010 TO AUG 12, 2010

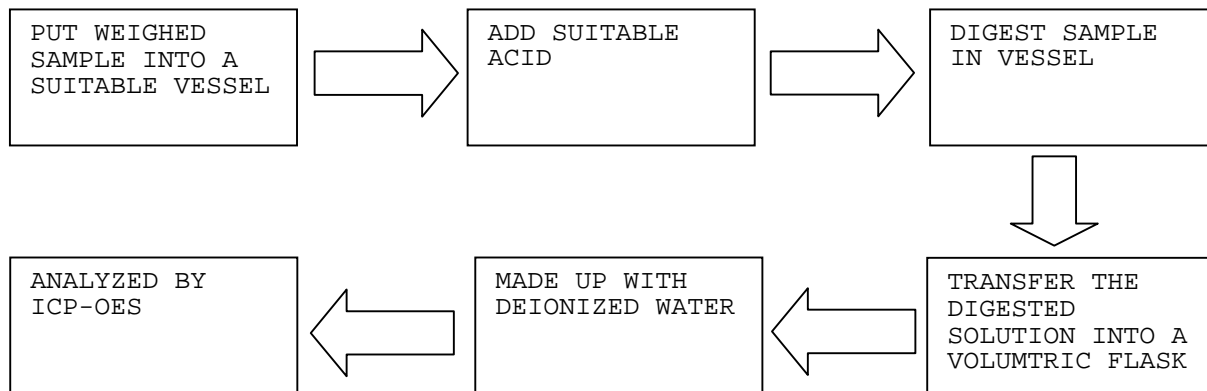
TEST REPORT

NUMBER: SZHH0051716902

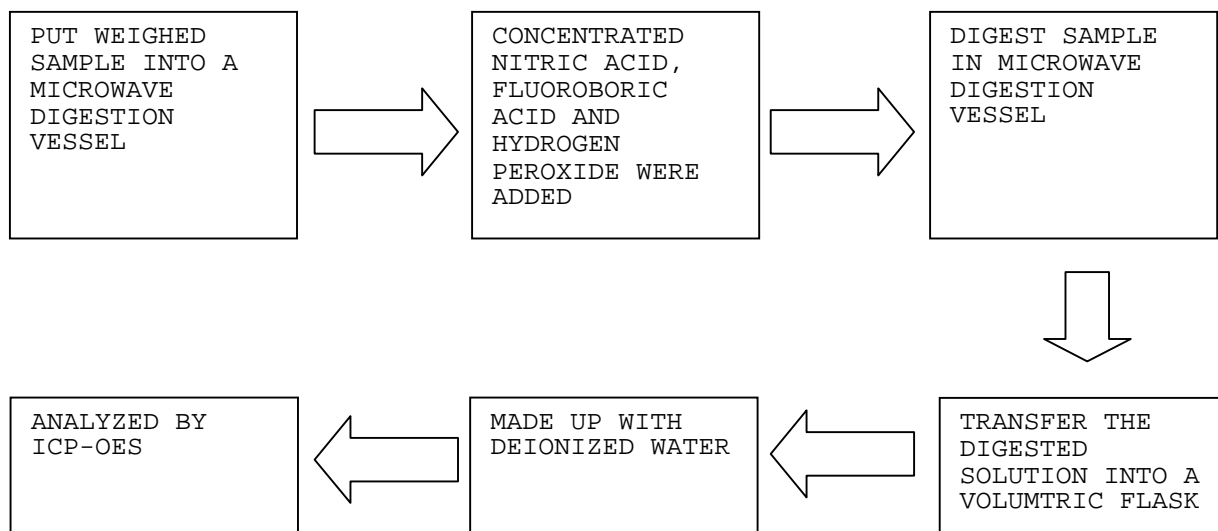
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS



2. TEST FOR Hg CONTENT

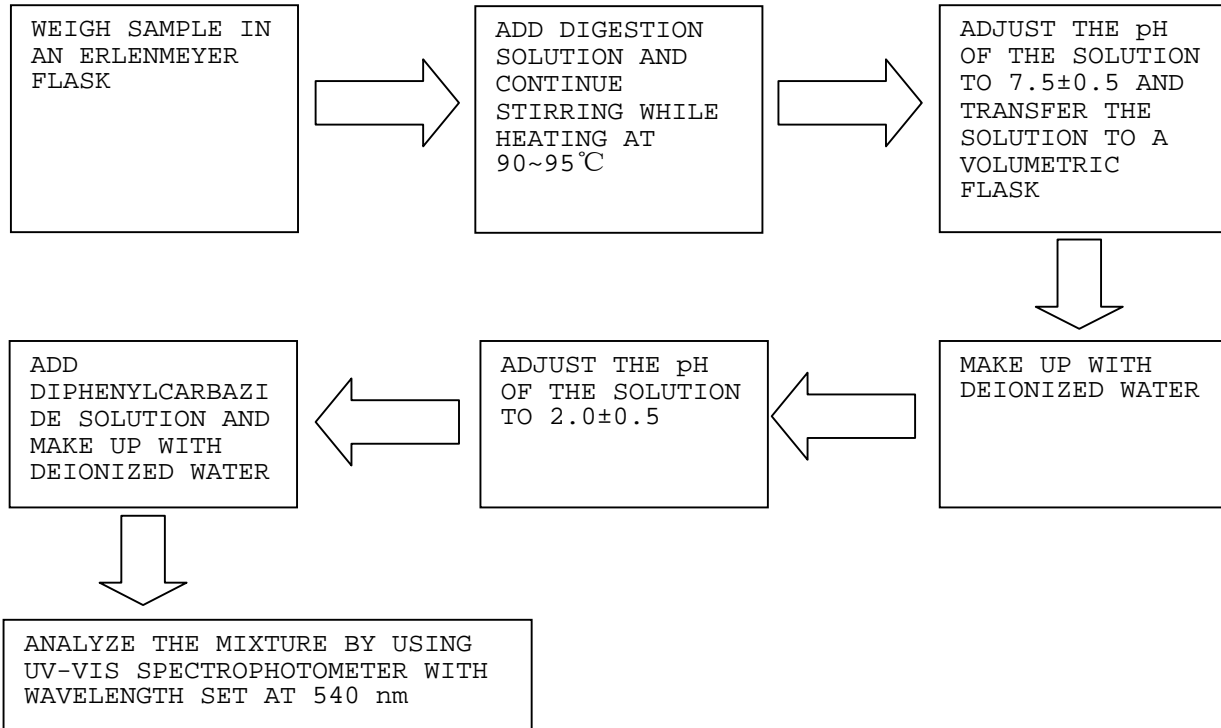


TEST REPORT

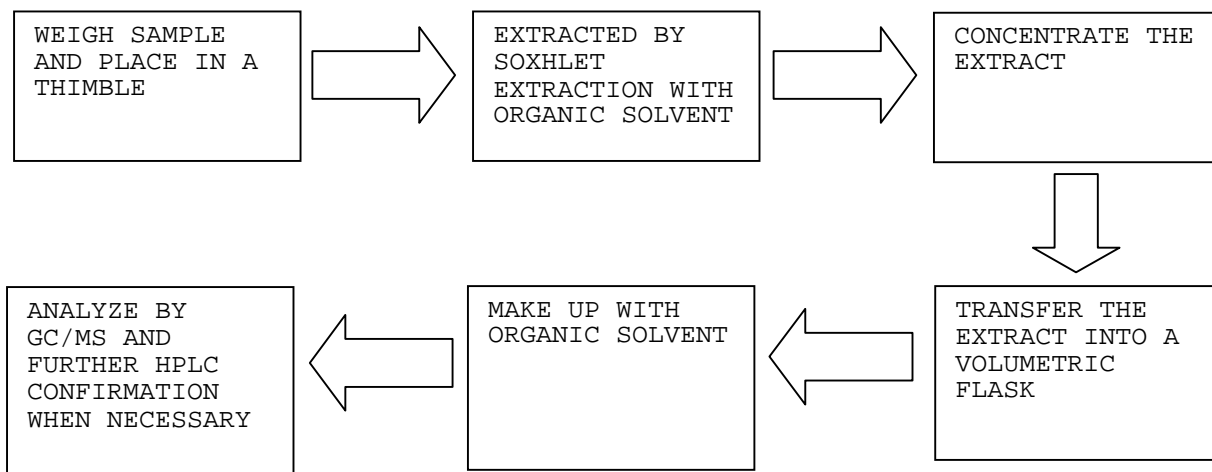
NUMBER: SZHH0051716902

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (ALKALINE DIGESTION)



4. TEST FOR PBBs/PBDEs CONTENTS



**TEST REPORT**

NUMBER: SZHH0051716902

TESTS CONDUCTED

2 (I) TEST RESULT SUMMARY :

HALOGEN CONTENT :

<u>TESTING ITEM</u>	<u>RESULT (ppm)</u>
FLUORINE (F) CONTENT	ND
CHLORINE (Cl) CONTENT	135
BROMINE (Br) CONTENT	ND
IODINE (I) CONTENT	ND

REMARKS : ppm = PARTS PER MILLION
ND = NOT DETECTED

(II) TEST METHOD :

<u>TESTING ITEM</u>	<u>TESTING METHOD</u>	<u>REPORTING LIMIT</u>
HALOGEN (F, Cl, Br, I) CONTENT	WITH REFERENCE TO BS EN 14582:2007 BY CALORIMETRIC BOMB AND DETERMINED BY ION CHROMATOGRAPHY	50 ppm

REMARK : REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE

DATE SAMPLE RECEIVED : AUG 11, 2010

TESTING PERIOD : AUG 11, 2010 TO AUG 13, 2010

TEST REPORT

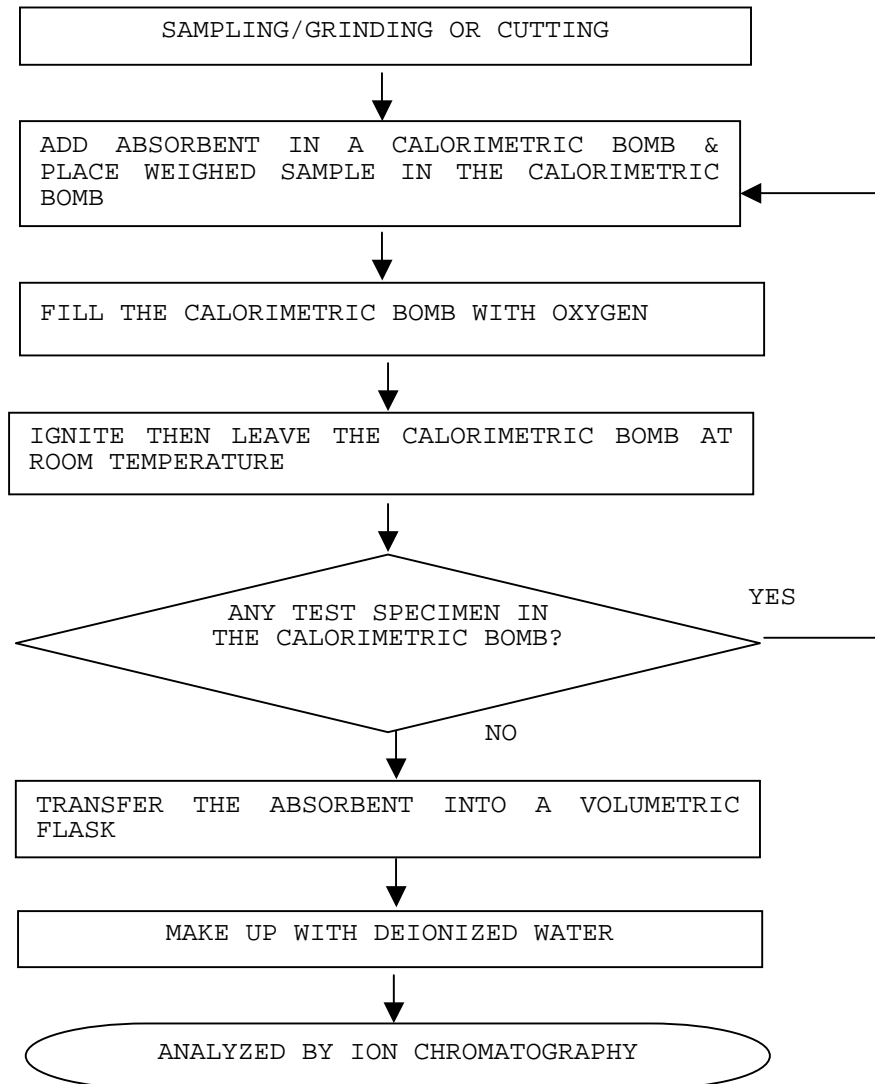
NUMBER: SZHH0051716902

TESTS CONDUCTED

(III) MEASUREMENT FLOWCHART:

TEST FOR HALOGEN CONTENT

REFERENCE METHOD: BS EN 14582:2007



END OF REPORT



Test Report

No.: GZ1009104795/CHEM

Date: SEP 13, 2010

Page 1 of 4

DONGGUAN QINGXI LINTALL ELECTRONIC APPLIANCES PLASTIC MFG., CO.
JINGLONG INDUSTRY ZONE, QINGXI TOWN, DONGGUAN CITY, GUANGDONG

The following sample(s) was/were submitted and identified on behalf of the applicant as BB BASE

SGS Job No. : SZML100902436
SGS Internal Reference No. : 4.3
Tested sample information : 868-153
Client Reference Information : 868-157, 868-151, 868-150, 868-154, 868-152,
868-156, 868-155; 868-157
Buyer : MILTON, HONG KONG
Manufacture : LANXESS, GRRMANY
Date of Sample Received : SEP 08, 2010
Testing Period : SEP 08, 2010 TO SEP 13, 2010

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 : 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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Member of the SGS Group (SGS SA)

Test Results:

Description for specimen 1 : Red plastic

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
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	51	2	1000
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321: 2008, UV-Vis	N.D.	2	1000
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	

Note:

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

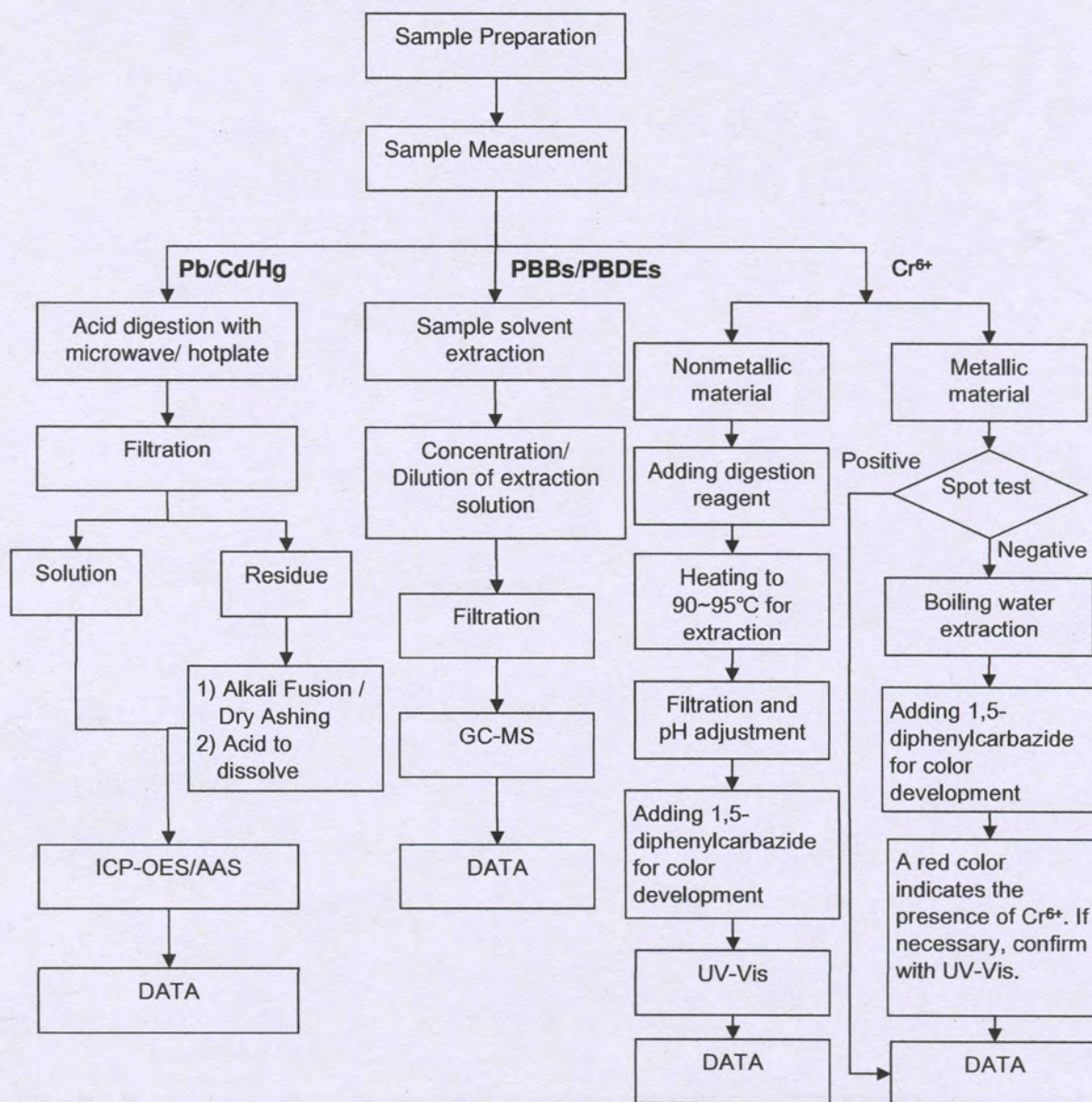
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ATTACHMENTS

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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Sample photo :



SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

No.: GZ1009104794/CHEM

Date: SEP 13, 2010

Page 1 of 4

DONGGUAN QINGXI LINTALL ELECTRONIC APPLIANCES PLASTIC MFG., CO.
JINGLONG INDUSTRY ZONE, QINGXI TOWN, DONGGUAN CITY, GUANGDONG

The following sample(s) was/were submitted and identified on behalf of the applicant as BB LID

SGS Job No. : SZML100902436
SGS Internal Reference No. : 4.2
Tested sample information : 868-153
Client Reference Information : 868-157, 868-151, 868-150, 868-154, 868-152,
868-156, 868-155; Material : 868-153
Buyer : MILTON, HONG KONG
Manufacture : LANXESS, GRRMANY
Date of Sample Received : SEP 08, 2010
Testing Period : SEP 08, 2010 TO SEP 13, 2010

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 : 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 Report

No.: GZ1009104794/CHEM

Date: SEP 13, 2010

Page 2 of 4

Test Results:

Description for specimen 1 : Red plastic

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
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	43	2	1000
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321: 2008, UV-Vis	N.D.	2	1000
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	

Note:

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

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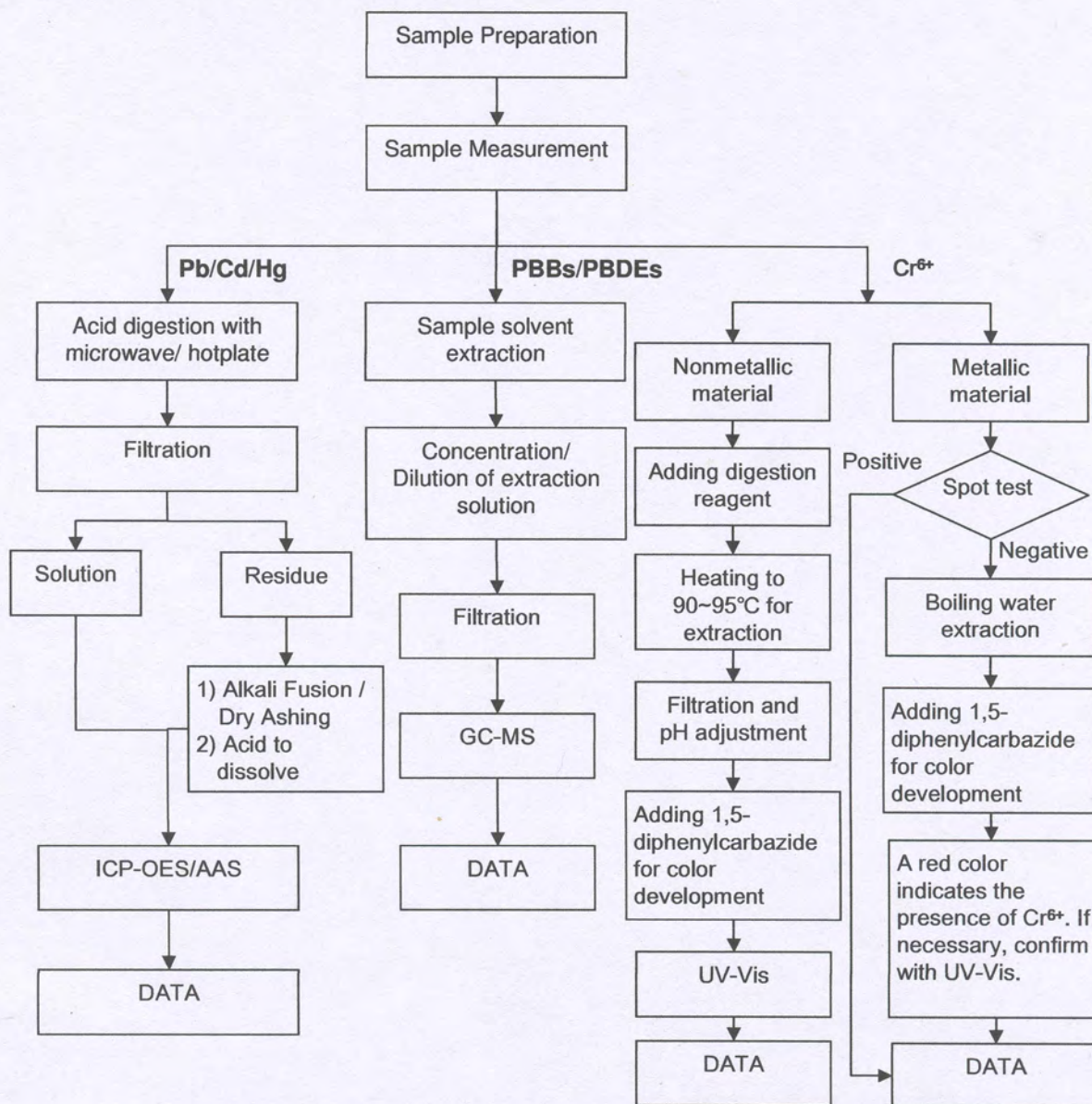
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ATTACHMENTS

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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Sample photo :



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Test Report

No.: GZ1009104793/CHEM

Date: SEP 21, 2010

Page 1 of 3

DONGGUAN QINGXI LINTALL ELECTRONIC APPLIANCES PLASTIC MFG., CO.
JINGLONG INDUSTRY ZONE, QINGXI TOWN, DONGGUAN CITY, GUANGDONG

The following sample(s) was/were submitted and identified on behalf of the applicant as DW0301

SGS Job No. : SZML100902436
SGS Internal Reference No. : 4.1
Tested sample information : DW0301
Client Reference Information : DW0302; Material : HPb59-1 黄铜合金
Buyer : 长安固帮
Manufacture : 南海日精
Date of Sample Received : SEP 08, 2010
Testing Period : SEP 08, 2010 TO SEP 13, 2010

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 : 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 Report

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Date: SEP 21, 2010

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Test Results:

Description for specimen 1 : Brassy metal

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321: 2008, ICP-OES	25	2	100
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	27874 ^[1]	2	1000
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	◇	#

Note:

1. mg/kg = ppm

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

3. MDL = Method Detection Limit

4. ◇ = 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.

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

Remark[1]: According to the specification from client, specimen is copper alloy, while Lead as an alloying element in copper alloy containing up to 4% Lead by weight is exempted by RoHS regulatory (Directive 2002/95/EC of the European Parliament and of the council of 27 January 2003).

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Sample photo :



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Test Report

Report No. RLSZC00043660000101

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Applicant BOLUO JIANDA(PUXING)METAL PRODUCT CO.,LTD

Address WORKSHOP A1,JIANDA METAL PLATING FACTORY,HUTOU MANAGEMENT DISTRICT, LONGXI TOWN,BOLUO,HUIZHOU CITY

Report on the submitted sample(s) said to be

Sample Name ZN₃/U₃
 Sample Description Blue plating
 Sample Received Date Jan. 19, 2010
 Testing Period Jan. 19, 2010 to Jan. 21, 2010

Test Requested 1.As specified by client, to determine the Lead(Pb), Cadmium(Cd), Mercury(Hg) content in the plating layer of submitted sample.
 2.As specified by client, to identify if there is the Hexavalent Chromium in the submitted sample.

Test Method

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Lead(Pb)	Plating layer test method(In-house method)and IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Cadmium(Cd)	Plating layer test method(In-house method)and IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Mercury(Hg)	Plating layer test method(In-house method)and IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

Test Result(s) Please refer to the following page(s).

Tested by 

Inspected by 

Approved by 
 Technical Manager

Date Mar. 9, 2010

No. 38798766

Test Report

Report No. RLSZC00043660000101

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Test Result(s)

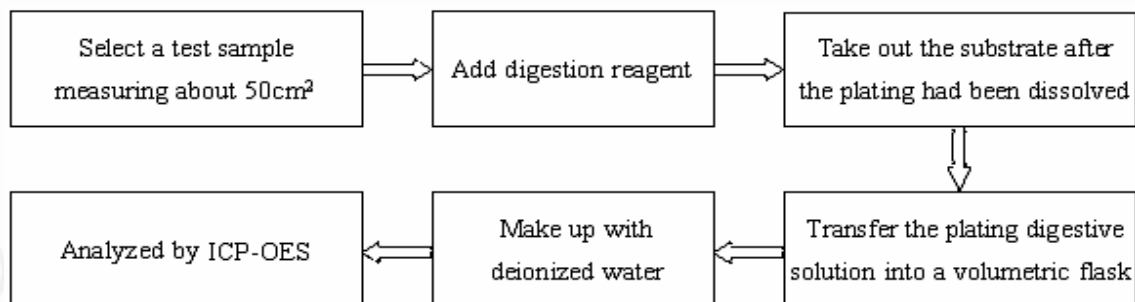
Tested Item(s)	Content
Lead(Pb)	N.D.
Cadmium (Cd)	N.D.
Mercury(Hg)	N.D.
Tested Item(s)	Conclusion
Hexavalent Chromium(Cr(VI))	Negative

Note:

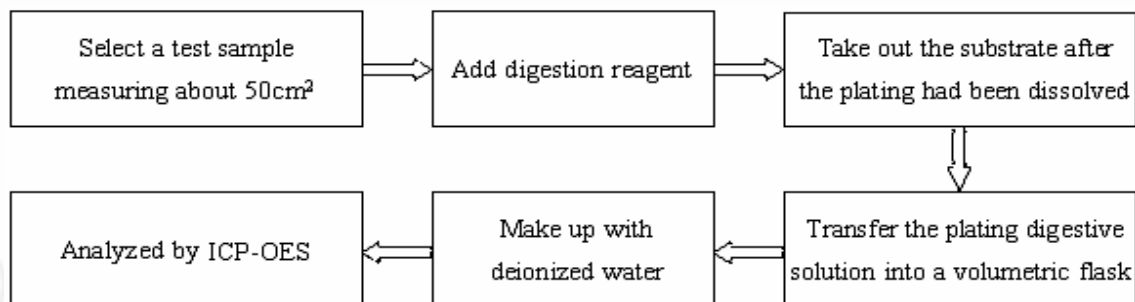
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

Test Process

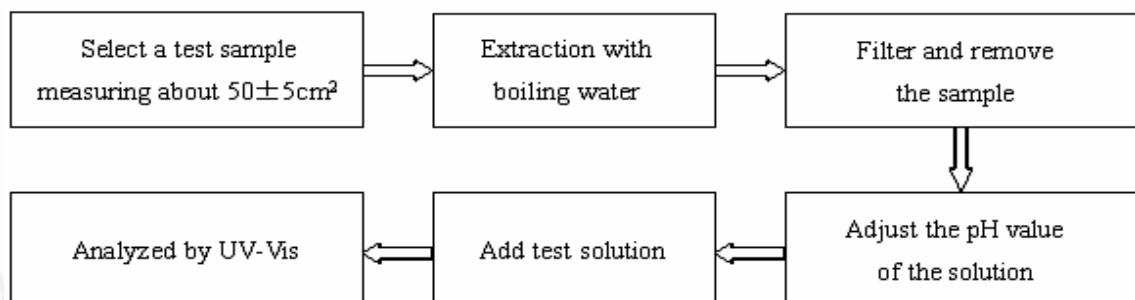
1. Lead(Pb), Cadmium(Cd)



2. Mercury(Hg)



3. Hexavalent Chromium(Cr(VI))

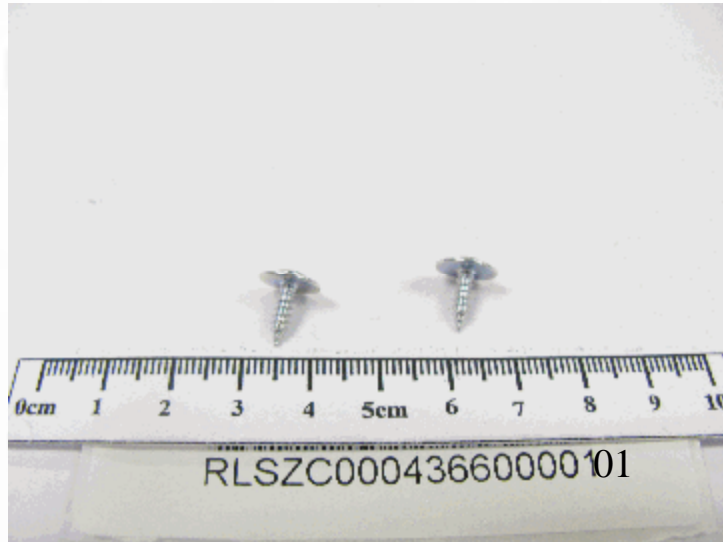


Test Report

Report No. RLSZC00043660000101

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Photo(s) of the sample(s)



*** End of report ***

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