規格承認書
Specification for Approval

客　戶：　泰金寶
Customer
品　名:　WIFI　ANTENNA
Part name
料　號：　GY196HT0131C-002
Part No.
客戶料號：
Customer Part No.
Rev.(版本):　01

客戶承認印　CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR
Approval No.		
Model		
Part No.		

CHIEF	SALES	R&D	DESIGN
ROX	PHOEBE	ROX	James
Date: 2014/12/10		Date: 2014/12/10	

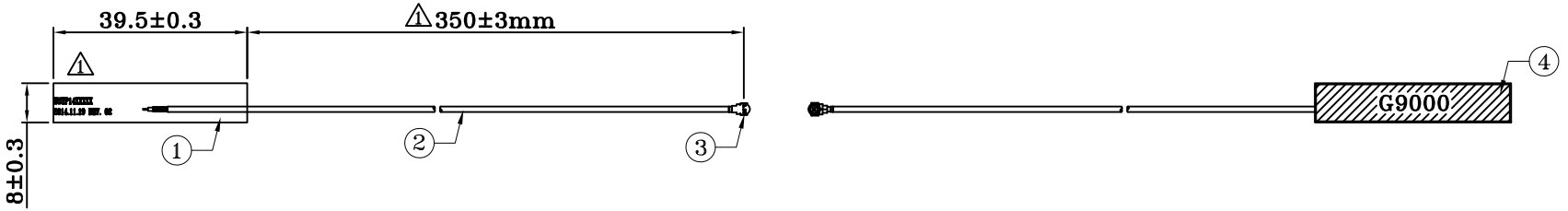
驊 陞 科 技 股 份 有 限 公 司
WIESON TECHNOLOGIES CO., LTD.
地址:廣東省東莞市厚街鎮環崗第一工業區

表格編號：324012 版本: 第四版

Customer Drawing

RoHS Compliant

REV	DATE	DESCRIPTION	NAME
01	14.10.23	NEW RELEASE	
02	14.11.24	⚠1 Modify PCB & Length	WEN



NO.	ITEM	DESCRIPTION	QTY
⑦			
⑥			
⑤			
④	Tape	G9000 adhesive tape , SIZE=39.5x7.5mm	1
③	Connector	MHF Connector for 1.13mm ,Gold Plated	1
②	Cable	OD:1.13mm Coaxial Cable , FEP Black Jacket	1
①	PCB	FR-4 , Size: 40 x 8 x 1.6mm	1

WIESON TECHNOLOGIES CO., LTD

PART NO.: GY196HT0131C-002

TITLE: WIFI Antenna

DRAWN BY	WEN (WST)	DRAWING NO.	WSTPXXXXXX
CHECKED BY		DRAWING SIZE	A4
APPROVED BY		UNIT	mm
SORTING NO.	WSC	PAGE	OF

[ARTICLE:044032 V6]

WIESON TECHNOLOGIES CO., LTD.	SPECIFICATION LIST	TYPE OF PRODUCT
		RF ANTENNA

INDEX

Rev	Date	Description	Edited by	Approvals	
				Prepared :	James
01	2014/12/11	ISSUE	James	Checked :	ROX
				Approved :	ROX
				Issued No :	01
				Sheet :	**1 OF 103**

WIESON TECHNOLOGIES CO.,LTD

BILL OF MATERIAL

Cust.	泰金寶	**TITLE**	**WIFI ANTENNA**
Cust.P/N		**WIESON P/N**	**GY196HT0131C-002**

NO.	DESCRIPTION	SUPPLIER	SUPPLIER PART NO.	UL NO.	AVL	QUANTITY	REMARK
1	OD:1.13mm Mini Coaxial Cable , FEP Black Jacket.	WIESON	GMINI-178B01D113TS	/	/	MM	/
2	FR4 PCB	WIESON	PCB	/	/	1PCS	/
3	MHF Connector for 1.13mm, Gold Plated		G7169-007101-H	/	/	1PCS	/
4	G9000 Tape		G9000 Tape	/	/	1PCS	/
5							
6							
7							
8							

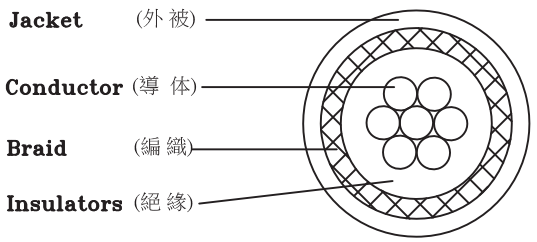
APPROVED BY:ROX **CHECKD BY:ROX** **DESIGNED BY: James**

版本 REV	狀態 STATUS	日期 DATE	說 明 DESCRIPTION	ECN NO.	NAME
A		12.3.12	原始版本		

Specification (品名規格) **32AWG*1C+B OD1.13**

Construction Item (結构項目)		A
Conductors 導 體	Construction AWG (构造線規)	32AWG 7/0.08
	Material (導體材質)	TINNED Copper (鍍錫銅)
	OD (絞合直徑)	/
Insulators 絕 緣	Material (絕緣材質)	FEP (鐵弗龍)
	Diameter (芯線線徑)	0.7±0.03mm
	Color (顏 色)	CLEAR (透明白)
	Average Thickness (平均厚度)	/
Inner-shield 內部遮蔽	Material (導體材質)	/
	Conductors Size (導体尺寸)	/
	Coverage (遮蔽率)	/
Inne Jacket 內部披覆	Material (絕緣材質)	/
	Diameter (芯線線徑)	/
	Color (顏 色)	/
Drain Wire 地 線	Conductors Size (導体尺寸)	/
	Material (材 質)	/
Outside-shield 外部遮蔽	Shield (遮蔽方式)	Braid (編 織)
	Conductors Size (導体尺寸)	16/4/0.05mm
	Material (材 質)	TINNED Copper (鍍錫銅)
	Coverage (遮蔽率)	90±5% MIN
Jacket 外 被	Material (材 質)	FEP (鐵弗龍)
	Diameter (線 徑)	1.13±0.05mm
	Surface (外 觀)	/
	Color (顏 色)	(黑色)
Marking 印 字	Marking No (印 字)	

Construction D.W.G (构造圖)



Color Code (芯線顏色)

CLEAR (透明白)

備注: 1.此產品需符合WIESON環保要求;

2.工作溫度:-55℃~+150℃;

3.衰減: AT 1GHz ≦ 2.32 dB/M, AT 2GHz ≦ 3.27 dB/M,AT 3GHz ≦ 4.01 dB/M,
AT 4GHz ≦ 4.64 dB/M, AT 5GHz ≦ 5.17 dB/M,AT 6GHz ≦ 5.69 dB/M.

C :Critical Dim @ :Major	WIESON TECHNOLOGIES CO., LTD		PART NO.: Z-GMINI-178B01D113TS
GENERAL TOLERANCE X.X=±0.20 X.XX=±0.10 X.X°±1°	DRAWN BY	FYP	DRAWING NO. GMINIZ-178B01D113TS
	CHECKED BY	JERRY	DRAWING SIZE A4
	APPROVED BY	ROX	UNIT mm
	SORTING NO.	WSC KA0161	PAGE 1 OF 1

Test Report

No. SHAEC1404233901 Date: 22 Mar 2014 Page 1 of 6

COLORANT CHROMATICS TRADING (SHANGHAI) CO.,LTD.

1607 LI AN ROAD, MINHANG DISTRICT, SHANGHAI, 201100 ， CHINA

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

SGS Job No. :	SP14-007237 - SH
Lot No. :	S1403103
Date of Sample Received :	19 Mar 2014
Testing Period :	19 Mar 2014 - 22 Mar 2014
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 samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

JJ Fan
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA14-042339.001	Black solid pellet

Remarks :

(1) 1 mg/kg = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
(5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	*001*
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit	MDL	*001*
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

Halogen

Test Method : With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

Test Item(s)	Unit	MDL	*001*
Fluorine (F)	mg/kg	50	>100000
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

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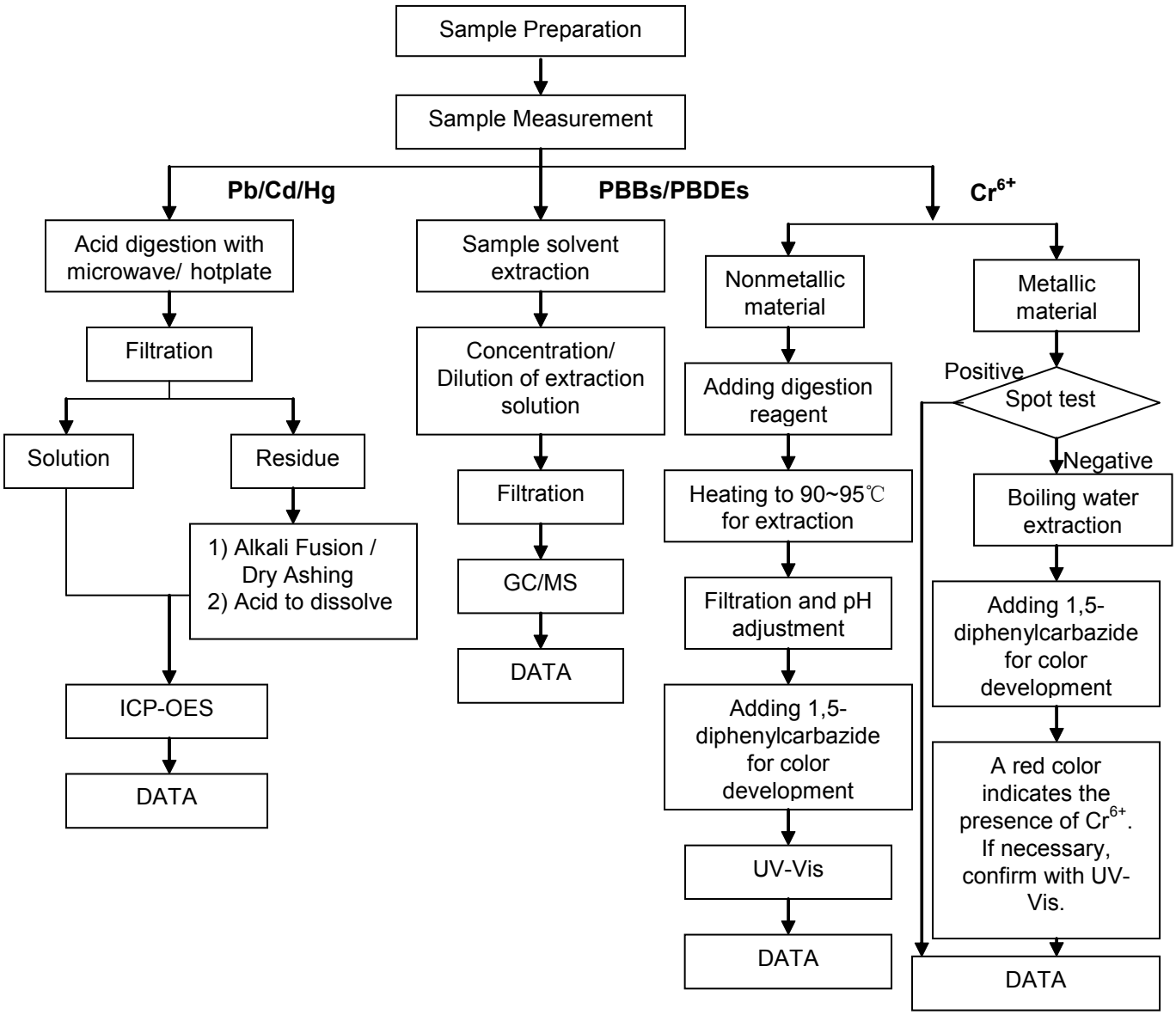
ATTACHMENTS

RoHS Testing Flow Chart

1) Name of the person who made testing: Jan Shi/Star Wang/Shara Wang/Gary Xu
2) Name of the person in charge of testing: Jeff Zhang/George Xu/ Jessy Huang
3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} and PBBs/PBDEs test method excluded)



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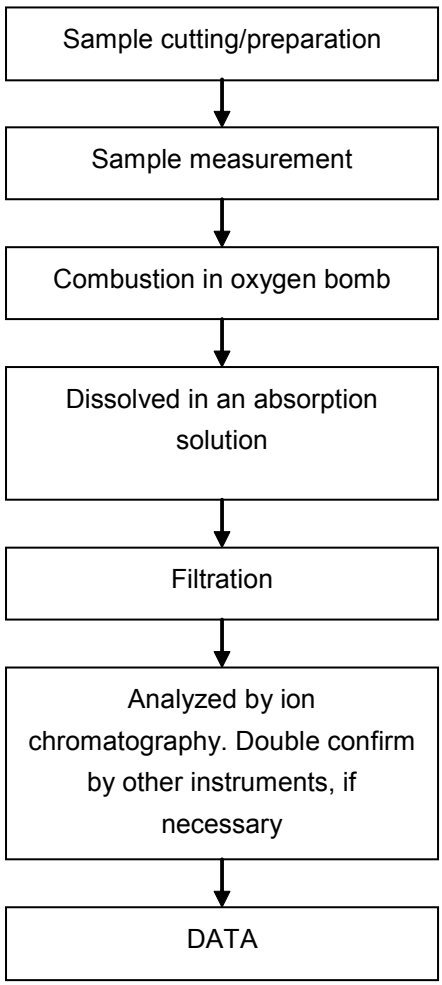
Halogen Testing (oxygen bomb) Flow Chart

1) Name of the person who made testing: Sisily Yin
2) Name of the person in charge of testing: Linda Li



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Sample photo:

SHA14-042339.001

SGS authenticate the photo on original report only

*** End of Report ***

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DAIKIN FLUOROCHEMICALS (CHINA) CO., LTD.

NO.8 JIN YU ROAD (WEST) ADVANCED MATERIALS INDUSTRIAL PARK, CHANGSHU, JIANGSU 215522, CHINA

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

SGS Job No. :	SP15-001027 - SH
Model No. :	NP-101
Date of Sample Received :	13 Jan 2015
Testing Period :	13 Jan 2015 - 20 Jan 2015
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 of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

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

Marry Ma
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA15-006641.005	Translucent pellet

Remarks :

(1) 1 mg/kg = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
(5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	*005*
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit	MDL	*005*
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II

Halogen

Test Method : With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

Test Item(s)	Unit	MDL	*005*
Fluorine (F)	mg/kg	50	>100000
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

Element(s)

Test Method : With reference to US EPA Method 3052:1996, analysis was performed by ICP-OES.

Test Item(s)	Unit	MDL	*005*
Arsenic (As)	mg/kg	10	ND

Notes :

Arsenic Reference Information: Entry 19 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2006/139/EC):
(i) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is intended for use to prevent the fouling by micro-organisms, plants or animals of:
— the hulls of boats,

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— cages, floats, nets and any other appliances or equipment used for fish or shellfish farming,
— any totally or partly submerged appliances or equipment.
(ii) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is intended for use in the treatment of industrial waters, irrespective of their use.
(iii) Shall not be used in the preservation of wood. Furthermore, wood so treated shall not be placed on the market.
Please refer to Regulation (EC) No 552/2009 to get more detail information

Phthalates

Test Method : Determination of phthalates by GC-MS based on EN 14372:2004.

Test Item(s)	CAS NO.	Unit	MDL	*005*
Dibutyl Phthalate (DBP)	84-74-2	%	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%	0.003	ND
Diisononyl Phthalate (DINP)	28553-12-0 /68515-48-0	%	0.01	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 /68515-49-1	%	0.01	ND

Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.

Tetrabromobisphenol A (TBBP-A)

Test Method : With reference to US EPA 3540C: 1996, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	*005*
Tetrabromobisphenol A (TBBP-A)	mg/kg	10	ND

Hexabromocyclododecane (HBCDD)

Test Method : Determination of HBCDD by GC-MS based on IEC 62321:2008.

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Test Item(s)	Unit	MDL	*005*
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance restriction.

Polycyclic aromatic hydrocarbons (PAHs)

Test Method : With reference to ZEK 01.4-08 of German ZLS and its amendments, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	005
Sum of 18 PAHs	mg/kg	-	ND
Naphthalene(NAP)	mg/kg	0.1	ND
Acenaphthylene(ANY)	mg/kg	0.1	ND
Acenaphthene(ANA)	mg/kg	0.1	ND
Fluorene(FLU)	mg/kg	0.1	ND
Phenanthrene(PHE)	mg/kg	0.1	ND
Anthracene(ANT)	mg/kg	0.1	ND
Fluoranthene(FLT)	mg/kg	0.1	ND
Pyrene(PYR)	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	mg/kg	0.1	ND
Chrysene(CHR)	mg/kg	0.1	ND
Benzo(b)fluoranthene(BbF) and Benzo(j)fluoranthene(BjF)	mg/kg	0.1	ND
Benzo(k)fluoranthene(BkF)	mg/kg	0.1	ND
Benzo(a)pyrene(BaP)	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	mg/kg	0.1	ND
Indeno(1,2,3-c,d)pyrene(IPY)	mg/kg	0.1	ND
Dibenzo(a,h)anthracene(DBA)	mg/kg	0.1	ND
Benzo(g,h,i)perylene(BPE)	mg/kg	0.1	ND

Notes :

Above 8 PAHs(BaA,CHR,BbF,BjF.BkF,BeP,BaP,DBA) are listed in Commission Regulation (EU) No 1272/2013 amending Annex XVII to Regulation (EC) No 1907/2006.

(1) In order to protect the health of consumers from the risk arising from exposure to PAHs in articles, limits on the PAH content in the accessible plastic or rubber parts of articles should be set, and the placing on the market of articles containing any of the PAHs in concentrations greater than 1 mg/kg in those parts should be prohibited.

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(2) Taking into account the vulnerability of children a lower limit value should be established. Therefore the placing on the market of toys and childcare articles, containing any of the PAHs in concentrations greater than 0,5 mg/kg in their accessible plastic or rubber parts, should be prohibited.

ZEK 01.4-08: Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3
	Material indented to be put in the mouth or material for toys with normal skin contact for children aged < 36 months	Materials those are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact).	Materials those are not included in Category 1 or 2, with predictable skin contact up to 30 s (short-term skin contact).
Benzo(a)pyrene (mg/kg)	<0.2**	1	20
Sum of 18 PAHs (mg/kg)*	<0.2**	10	200

Notes:

* = Only PAH substances >0.1 mg/kg are taken into account while calculating the sum of PAHs

** = In case that the maximum values exceed the limits of category 1, but are within the limits of category 2, one may confirm the suitability of the tested material which is indented to be put in the mouth by additional specific migration tests of PAH components based on DIN EN 1186ff and §64 LFGB 80.30-1. The conclusion of the migration test results must be made based on food law criteria.

PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid)

Test Method : With reference to US EPA 3550C: 2007, analysis was performed by HPLC-MS.

Test Item(s)	Limit	Unit	MDL	005
Perfluorooctane Sulfonates (PFOS) and related Acid,Metal Salt and Amide	1000	mg/kg	10	ND
Perfluorooctanoic Acid (PFOA)	-	mg/kg	10	ND

Notes :

Max. limit specified by commission regulation (EU) No. 757/2010 amending regulation (EC) No 850/2004.

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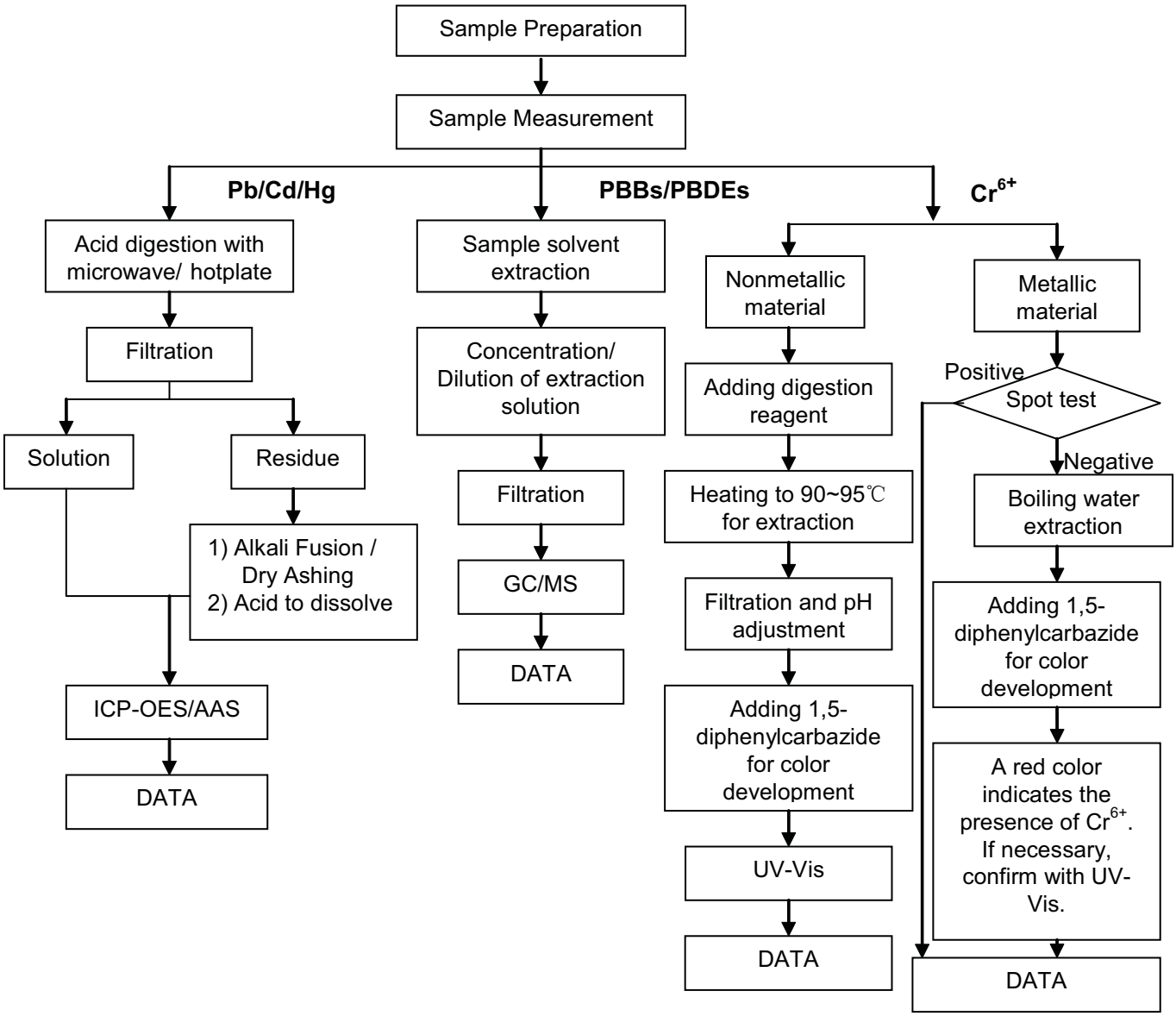
ATTACHMENTS

RoHS Testing Flow Chart

1) Name of the person who made testing: Bob Zhang/Gary Xu/Stone Chen/Sunny Qin
2) Name of the person in charge of testing: Jan Shi/Summer Jin/Jessy Huang
3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} and PBBs/PBDEs test method excluded)



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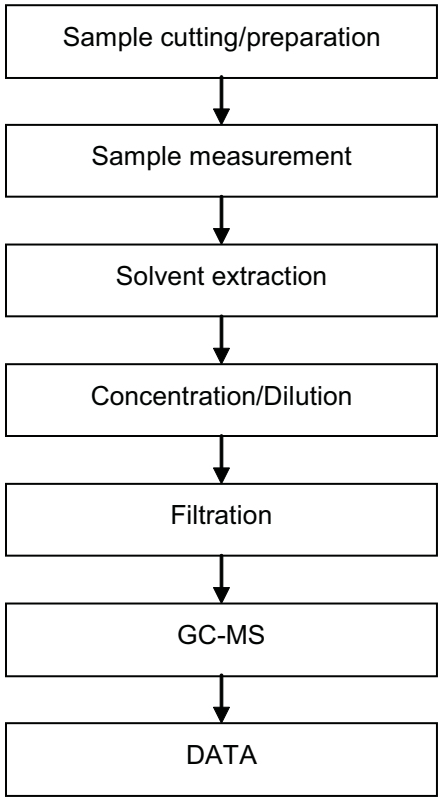
ATTACHMENTS

Phthalates Testing Flow Chart

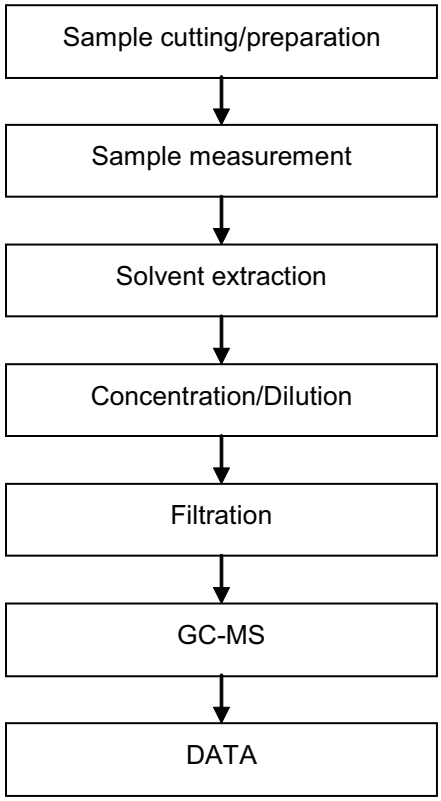
1) Name of the person who made testing: Sherlock Gao
2) Name of the person in charge of testing: Myra Ma



ATTACHMENTS

HBCDD Testing Flow Chart

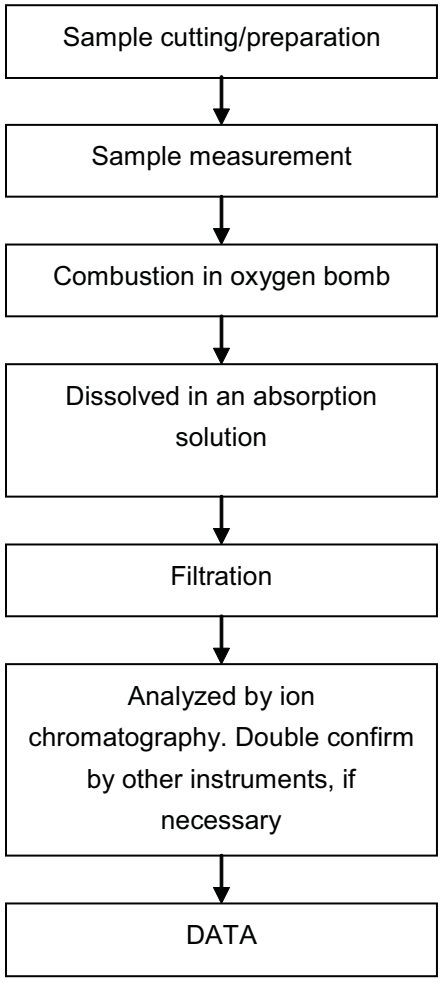
1) Name of the person who made testing: Gary Xu
2) Name of the person in charge of testing: Jessy Huang



ATTACHMENTS

Halogen Testing (oxygen bomb) Flow Chart

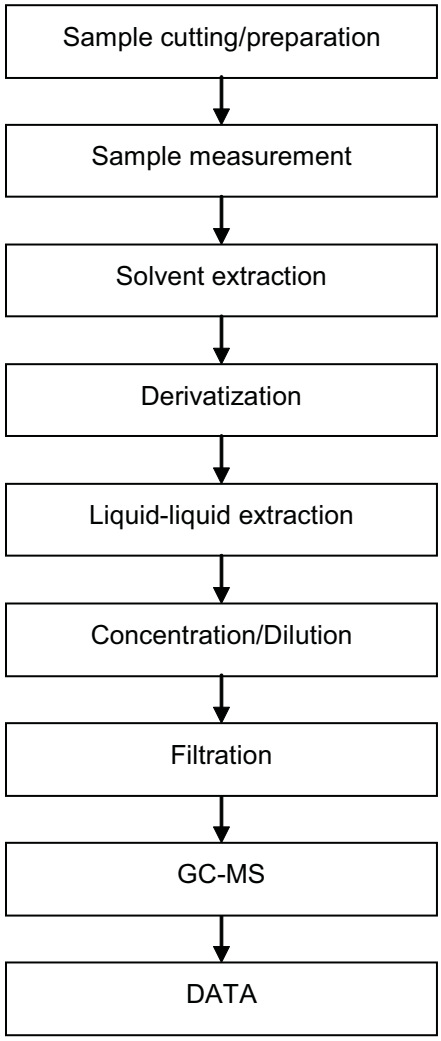
1) Name of the person who made testing: Sisily Yin
2) Name of the person in charge of testing: Linda Li



ATTACHMENTS

TBBP-A Testing Flow Chart

1) Name of the person who made testing: Gary Xu
2) Name of the person in charge of testing: Jessy Huang



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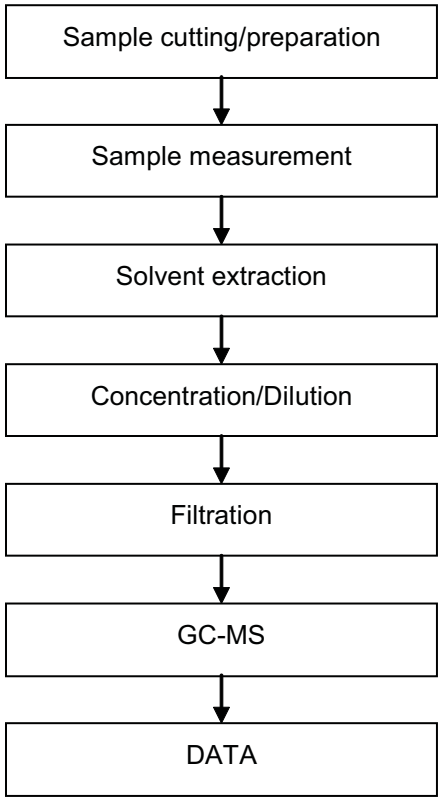
ATTACHMENTS

PAHs Testing Flow Chart

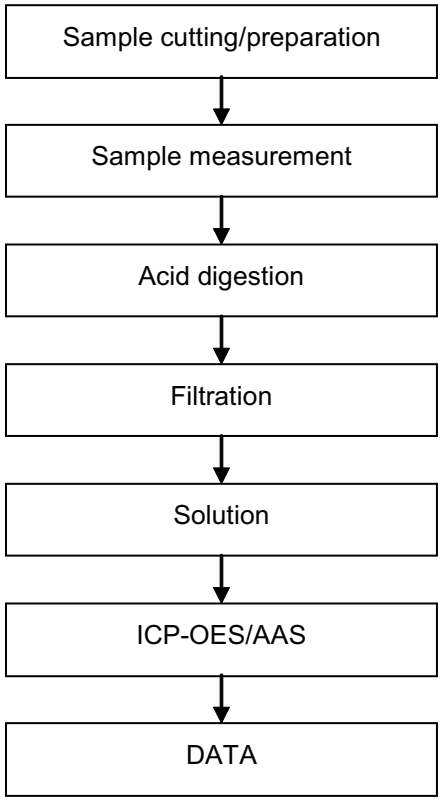
1) Name of the person who made testing: Lisa Duan
2) Name of the person in charge of testing: Jessy Huang



ATTACHMENTS

Elements Testing Flow Chart

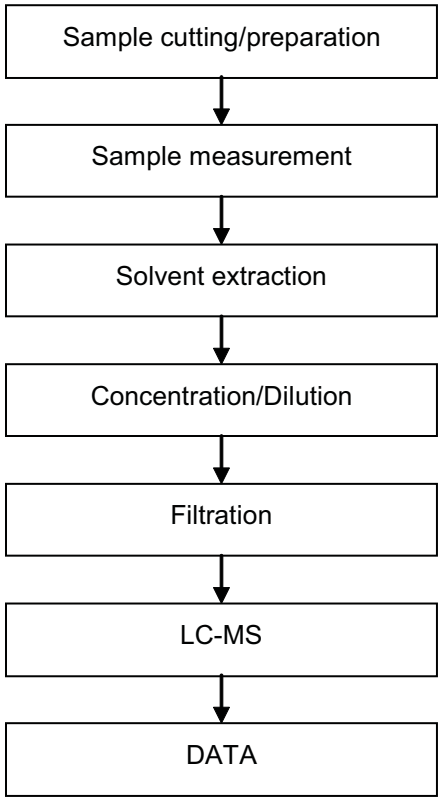
1) Name of the person who made testing: Bob Zhang/Sunny Qin
2) Name of the person in charge of testing: Summer Jin/Jan Shi



ATTACHMENTS

PFOS/PFOA Testing Flow Chart

1) Name of the person who made testing: Jane Yang
2) Name of the person in charge of testing: Myra Ma



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Sample photo:

SHA15-006641.005

SGS authenticate the photo on original report only

*** End of Report ***

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检测报告
Test Report

申请单位	浙江正导光电股份有限公司
Applicant	ZHEJIANG ZHENGDAO OPTOELECTRONICS CO.,LTD
地址	浙江省湖州市练市镇正导路8号
Address	NO.8 ZHENGDAO ROAD LIANSHI TOWN HUZHOU CITY ZHEJIANG PROVINCE

以下测试之样品及样品信息由申请者提供并确认
The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

样品名称	镀锡铜线
Sample Name	Tinned Copper Wire
材料名称	铜、锡
Material	Cu、Sn
样品接收日期	2014.12.08
Sample Received Date	Dec. 8, 2014
样品检测日期	2014.12.08-2014.12.12
Testing Period	Dec. 8, 2014 to Dec. 12, 2014

检测要求
Test Requested

1.根据客户要求，对所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))进行测试。
2.根据客户要求，对所提交样品镀层中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))，多溴联苯(PBBs)，多溴二苯醚(PBDEs)，氟(F)，氯(Cl)，溴(Br)，碘(I)，全氟辛烷磺酸盐(PFOS)，全氟辛烷酸(PFOA)进行测试。
1.As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample(s).
2. As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyl(PBBs) , Polybrominated Diphenyl Ethers(PBDEs), Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I), Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA) in the plating of submitted sample(s).

检测依据/检测结果: 请参见下页。
Test Method/Test Result(s): Please refer to the following page(s).

主 检 Tested by: Sha Chen
审 核 Reviewed by:
批 准 Approved by: Wei Miao
日 期 Date: 2014.12.15

Wei Miao
Approved Signatory

No. R138204536

宁波市华测检测技术有限公司 浙江省宁波市高新区创苑路750号A座7-8楼
Centre Testing International(Ningbo)Co.,ltd. 7 8/F/.,Building A,No.750.Chuangyuan Road,Gaoxin District,Ningbo,Zhejiang,China

检测报告
Test Report

检测依据 Test Method

测试项目 Tested Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	IEC 62321-5:2013 Ed.1.0 参考 IEC 62321-5:2013 Ed.1.0 Refer to IEC 62321-5:2013 Ed.1.0	ICP-OES
镉 Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0 参考 IEC 62321-5:2013 Ed.1.0 Refer to IEC 62321-5:2013 Ed.1.0	ICP-OES
汞 Mercury (Hg)	IEC 62321-4:2013 Ed.1.0 参考 IEC 62321-4:2013 Ed.1.0 Refer to IEC 62321-4:2013 Ed.1.0	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis
多溴联苯(PBBs) Polybrominated Biphenyls (PBBs)	IEC 62321:2008 Ed.1Annex A	GC-MS
多溴二苯醚(PBDEs) Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321:2008 Ed.1 Annex A	GC-MS
全氟辛烷磺酸盐(PFOS) Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷酸(PFOA) Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
氟(F) Fluorine(F)	参考BS EN 14582:2007* Refer to BS EN 14582:2007*	IC
氯(Cl) Chlorine(Cl)	参考BS EN 14582:2007* Refer to BS EN 14582:2007*	IC
溴(Br) Bromine(Br)	参考BS EN 14582:2007* Refer to BS EN 14582:2007*	IC
碘(I) Iodine(I)	参考BS EN 14582:2007* Refer to BS EN 14582:2007*	IC

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result		方法检测限 MDL
	1	2	
铅 Lead (Pb)	7 mg/kg	21 mg/kg	2 mg/kg
镉 Cadmium (Cd)	N.D.	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	N.D.	2 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	—	—	2 mg/kg
	阴性 Negative	阴性 Negative	/

测试项目 Tested Item(s)	结果Result	方法检测限 MDL
	2	
多溴联苯(PBBs) Polybrominated Biphenyls(PBBs)		
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg
多溴二苯醚(PBDEs) Polybrominated Diphenyl Ethers(PBDEs)		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

检测报告
Test Report

测试项目 Tested Item(s)	结果 Result	方法检测限 MDL
	2	
卤素 Halogens		
氟 Fluorine (F)	N.D.	1 μg/cm²
氯 Chlorine (Cl)	N.D.	1 μg/cm²
溴 Bromine (Br)	N.D.	1 μg/cm²
碘 Iodine (I)	N.D.	1 μg/cm²

测试项目 Tested Item(s)	结果 Result	方法检测限 MDL
	2	
全氟辛烷磺酸盐(PFOS) Perfluorooctane Sulfonates(PFOS)	N.D.	0.5 μg/m²
全氟辛烷酸(PFOA) Perfluorooctanoic Acid(PFOA)	N.D.	0.5 μg/m²

测试样品/部位描述

Tested Sample/Part Description

1 金属基材 Metal base
2 银色镀层 Silvery plating

注释: **对于检测铅，镉，汞之样品已完全溶解**
对于检测铅，镉，汞之被剥离下来的电镀层已完全溶解。
-N.D. = 未检出 (小于方法检测限)
-mg/kg = ppm = 百万分之几
-阴性=不含有六价铬，由表面积为50cm²的样品所萃取出来的溶液中的六价铬的浓度小于0.02mg/kg
-*=超声萃取，取萃取液经 IC 测试。

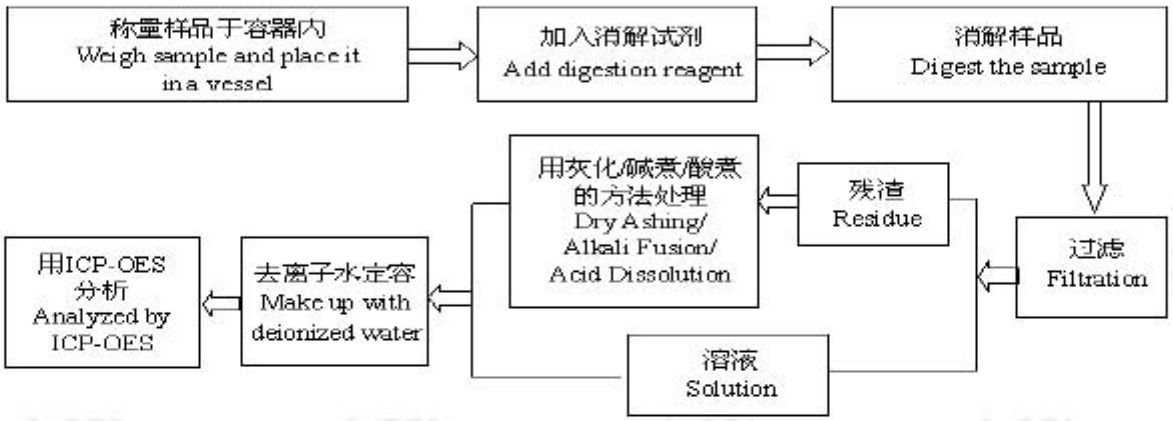
Note: **The sample had been dissolved totally tested for Lead, Cadmium, Mercury.**
The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling waterextraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.
-*= Extracted by an ultrasonic , and then the extracted liquid is analyzed by IC.

检测报告
Test Report

检测流程 Test Process

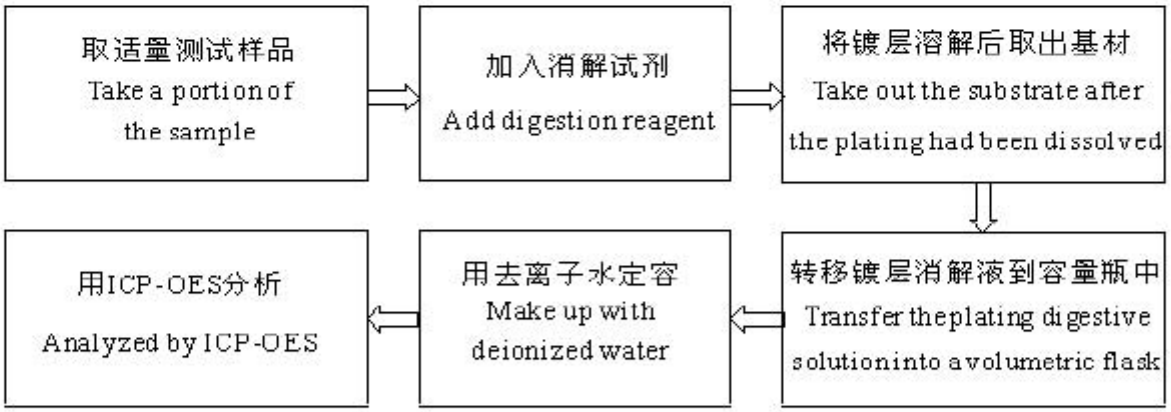
1.铅/镉 Pb/Cd

IEC 62321-5:2013 Ed.1.0



参考 IEC 62321-5:2013 Ed.1.0

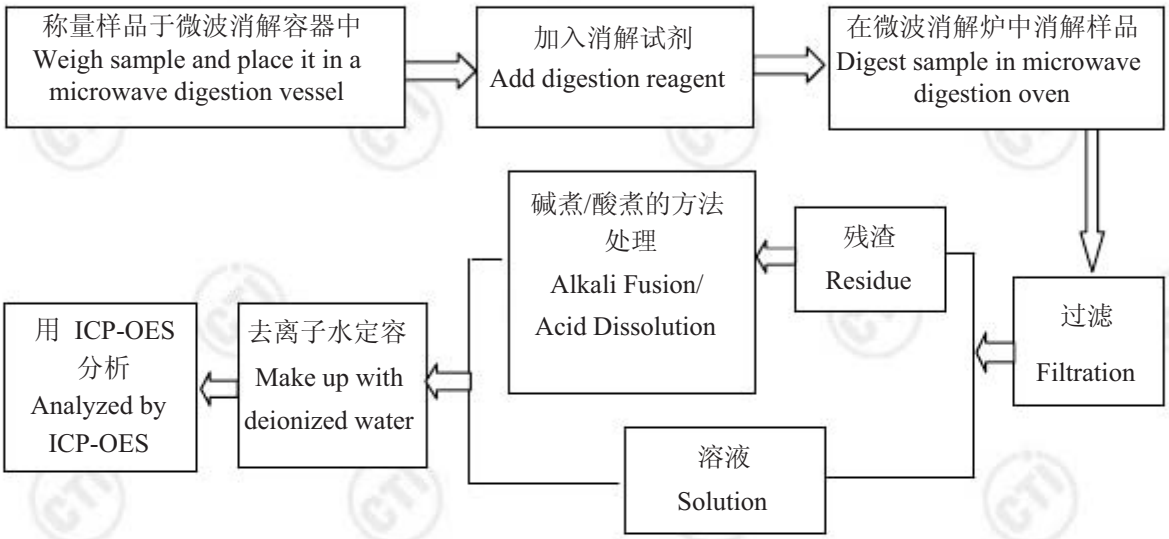
Refer to IEC 62321-5:2013 Ed.1.0



检测报告
Test Report

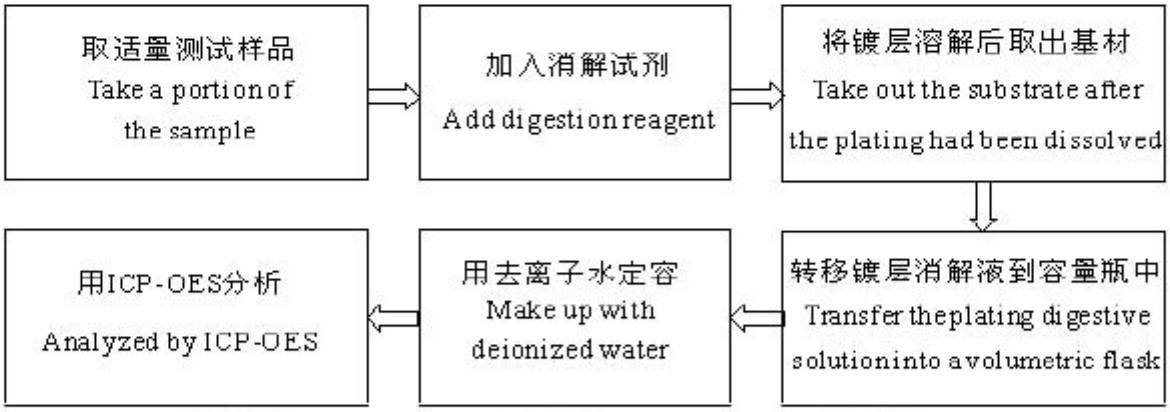
2.汞 Hg

IEC 62321-4:2013 Ed.1.0



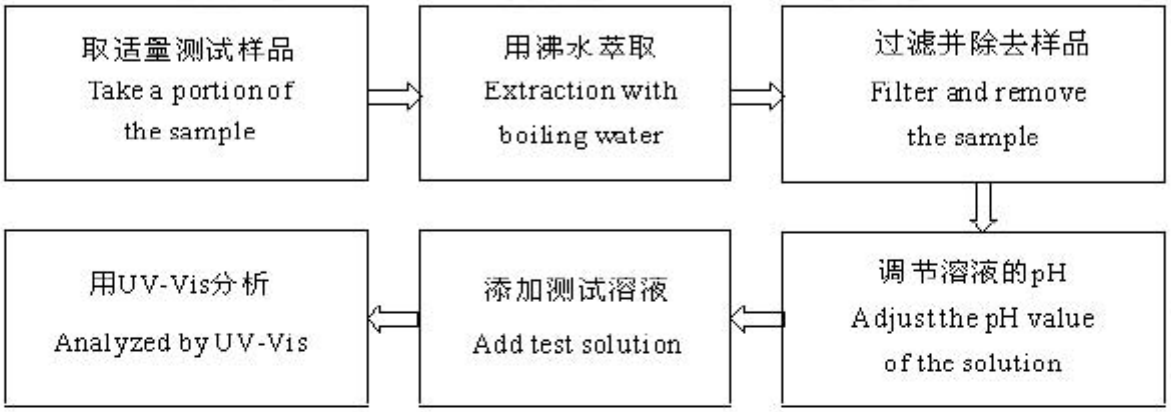
参考 IEC 62321-4:2013 Ed.1.0

Refer to IEC 62321-4:2013 Ed.1.0



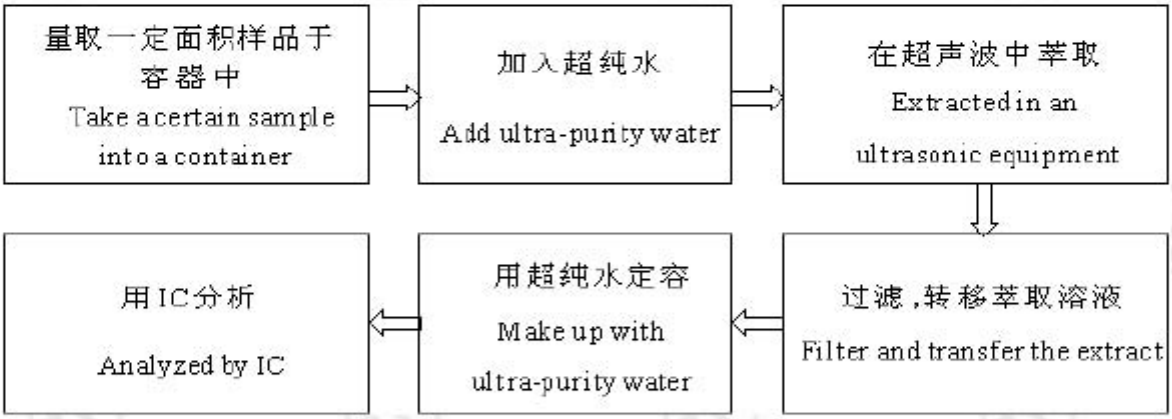
检测报告
Test Report

3.六价铬 Chromium(Ⅵ)



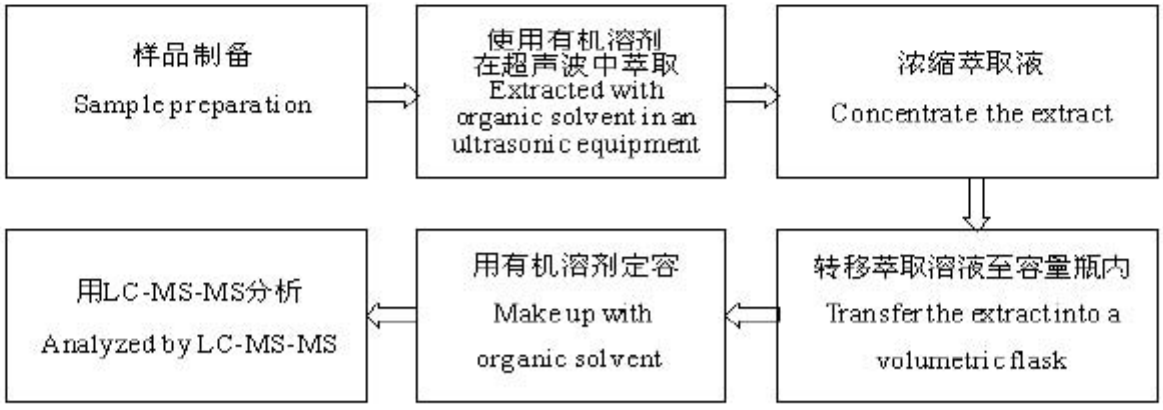
4. 溴(Br), 氯(Cl), 氟(F), 碘(I)

Bromine(Br), Chlorine(Cl), Fluorine(F), Iodine(I)



5. 全氟辛烷磺酸盐(PFOS), 全氟辛烷酸(PFOA)

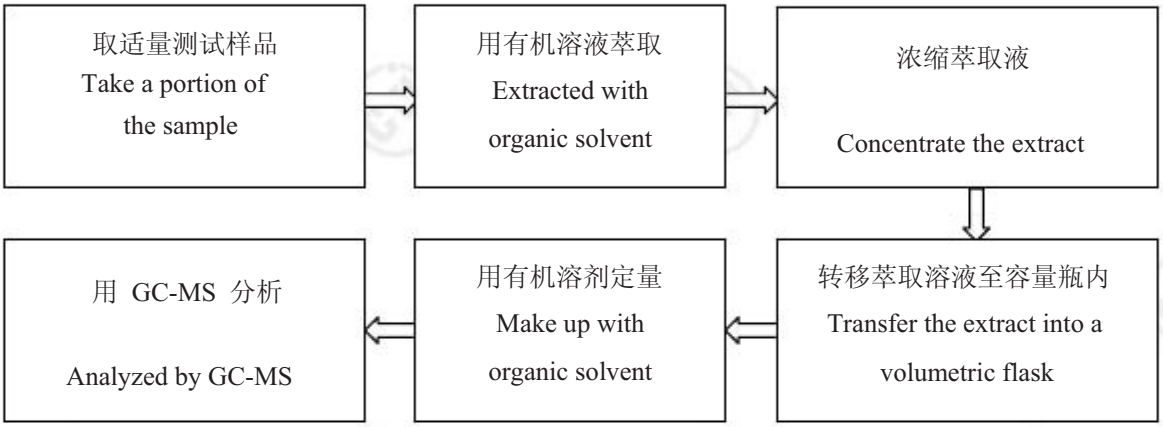
Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA)



检测报告
Test Report

6. 多溴联苯(PBBs), 多溴二苯醚(PBDEs)

Polybrominated Biphenyl(PBBs) , Polybrominated Diphenyl Ethers(PBDEs)



检测报告
Test Report

样品图片

Photo(s) of the sample(s)

1

2

*** 报告结束 ***
*** End of report ***

検査報告書

報告書No.JP/2014/060186　　日付:2014年6月16日　　1 頁 全 4 頁

三菱電機メテックス株式会社

神奈川県相模原市中央区宮下1-1-57

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CLIENT AS:
以下のサンプルは顧客により提供され、顧客に代わって確認を行いました:

サンプル名	:	C5210R 製造ロット番号:12730
御社オーダーNo.	:	
サンプル受領日	:	2014/06/05
分析期間	:	2014/06/05 - 2014/06/13

TEST REQUESTED
分析項目 : SELECTED TEST(S) AS REQUESTED BY CLIENT.
分析項目は顧客の要求によります。

TEST METHOD(S)
分析方法 : WITH REFERENCE TO LATEST EDITION OF IEC62321 FOR RoHS 6 SUBSTANCES.
OTHER CHEMICALS WERE TESTED BY EACH APPROPRIATE METHOD.
RoHS6物質の分析は最新版のIEC62321を参照しました。
それ以外の化学物質についてはそれぞれに最適な方法で分析を行いました。

TEST RESULT(S)
分析結果 : PLEASE REFER TO THE NEXT PAGE(S).
以下のページをご参照願います。

大内　幸弘

品質管理者 / 大内 幸弘
SGSジャパン株式会社
ケミカルラボラトリー

SGS Japan Inc.
YBP East Tower 12F, 134 Godo-cho Hodogaya-ku Yokohama 240-0005, Japan
t +81(0) 45 330 1100 f +81(0) 45 330 1108　URL: www.jp.sgs.com

検査報告書

三菱電機メテックス株式会社

神奈川県相模原市中央区宮下1-1-57

分析結果

項目	単位	結果	前処理	機器/場所	MDL
カドミウム(Cd)	mg/kg	検出せず	IEC62321-5: 2013	ICP-OES	2
鉛(Pb)	mg/kg	20	IEC62321-5: 2013	ICP-OES	2
水銀(Hg)	mg/kg	検出せず	IEC62321-4: 2013	ICP-OES	2
六価クロム(Cr(VI))	μg/㎠	検出せず	IEC62321: 2008 付属文書B	UV/VIS	0.01

補足: mg/kg = ppm, MDL(Method Detection Limit) = 方法下限値

注釈: Cr(VI)分析はサンプル表面積:12㎠を使用しました。
ご参考: 六価クロムの方法下限値はサンプル重量より2(ppm)に換算されます。

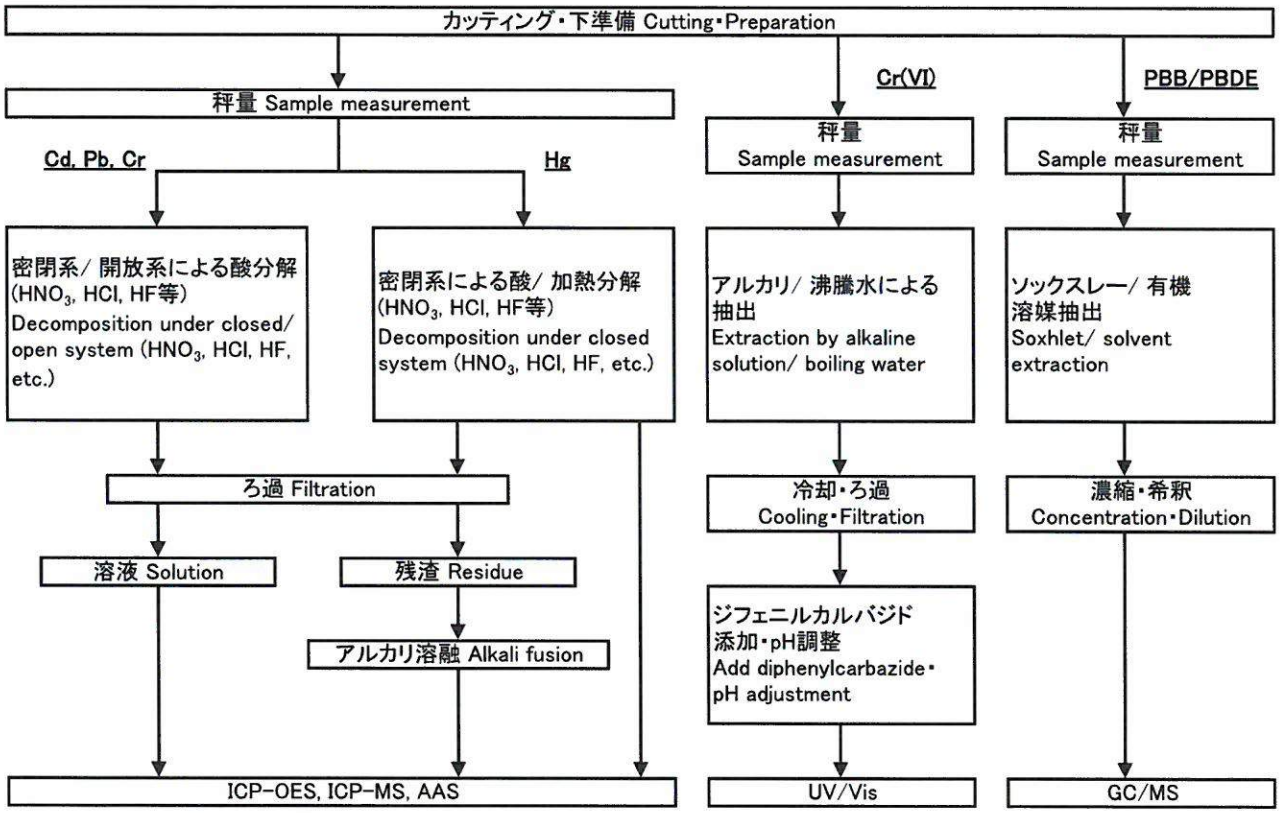
SGS Japan Inc.
YBP East Tower 12F, 134 Godo-cho Hodogaya-ku Yokohama 240-0005, Japan
t +81(0) 45 330 1100 f +81(0) 45 330 1108　URL: www.jp.sgs.com

三菱電機メテックス株式会社

神奈川県相模原市中央区宮下1-1-57

分析フローチャート MEASUREMENT FLOW CHART

1)酸分解前処理において試料を完全分解しています。
The sample was dissolved/ decomposed totally by acid pre-conditioning method according to below flow chart.
2)Cd, Pb, Hg, Cr, Cr(VI)
分析担当者 Name of the person in charge of measurement: 野田　晴美　Harumi Noda
3)PBB/PBDE
分析担当者 Name of the person in charge of measurement: 野田　晴美　Harumi Noda
4)分析責任者 Name of the person responsible for measurement: 大谷　真由美 Mayumi Otani



SGS Japan Inc.
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t +81(0) 45 330 1100 f +81(0) 45 330 1108　URL: www.jp.sgs.com

検査報告書

報告書No.JP/2014/060186　　日付:2014年6月16日　　4 頁 全 4 頁

三菱電機メテックス株式会社

神奈川県相模原市中央区宮下1-1-57

サンプル画像

*** 以上 ***

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Test Report

No. : CE/2014/81884 Date : 2014/08/19

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

The following samples was/were submitted and identified by/on behalf of the applicant as :

Sample Submitted By	:	SHINKONG SYNTHETIC FIBERS CORPORATION
Sample Description	:	THERMOPLASTIC POLYESTER RESIN
Style/Item No.	:	SHINITE® PBT F202G15BK, F202G30BK, F202G15NA, F202G30NA, F202G30WH, F202G30GY, F202G30BL,F202G30RD, F216BK, F216NA
Manufacturer/Vendor	:	SHINKONG SYNTHETIC FIBERS CORPORATION
Country of Origin	:	TAIWAN
Sample Receiving Date	:	2014/08/13
Testing Period	:	2014/08/13 TO 2014/08/19

==========

Test Requested : As specified by client, to test PFOS content in the submitted sample.

Test Method : With reference to US EPA 3550C: 2007.

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

Edison Chang / Sr. Supervisor
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

Test Result(s)

PART NAME No.1 : MIXED ALL BLACK, WHITE, RED, BLUE PLASTIC PELLETS

Test Item(s)	Unit	Method	MDL	Result
				No.1
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.

Note :

1. mg/kg = ppm; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

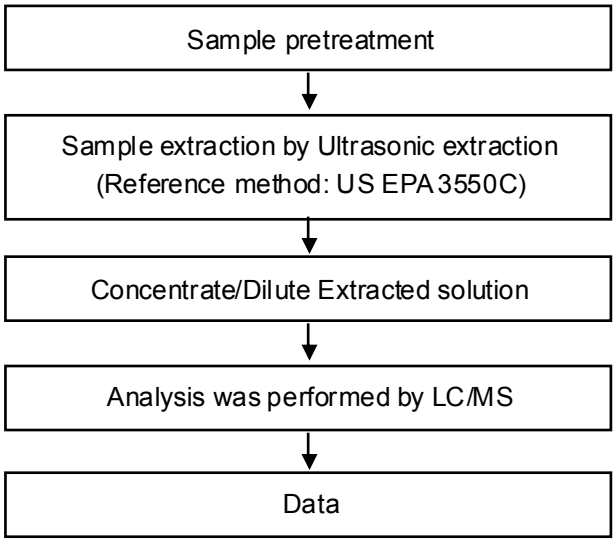
PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1μg/m².

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

PFOS analytical flow chart of Ultrasonic extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



Test Report

No. : CE/2014/81884 Date : 2014/08/19

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

CE/2014/81884

** End of Report **

Test Report

No. CANML1404218101 Date: 22 Apr 2014 Page 1 of 4

SHENZHEN LONG TIANYUAN HARDWARE INDUSTRIAL CO., LTD

SHENZHEN BAOAN DISTRICT SONGGANG ZHENJIANG ENTREPRENEURSHIP FOUR SIDE VILLAGE ROAD NO.10

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

SGS Job No. :	GZIN1403003486PC - GZ
Internal Reference No. :	2.1
Date of Sample Received :	31 Mar 2014
Testing Period :	31 Mar 2014 - 22 Apr 2014
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.

Daisy Dai
Approved Signatory

198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075113 www.sgsgroup.com.cn
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 e sgs.china@sgs.com

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN14-042181.001	Silver-gray plating on metal

Remarks :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

Elementary Analysis

Test Method : (1)Determination of Cadmium and Lead by ICP-OES after application of modified surface etching digestion based on IEC62321-5:2013
(2)Determination of Mercury by ICP-OES after application of modified surface etching digestion based on IEC 62321-4:2013
(3) Determination of Hexavalent Chromium by spot test/ UV-Vis with reference to IEC 62321:2008

Test Item(s)	Unit	MDL	*001*
Cadmium (Cd)	mg/kg	10	ND
Lead (Pb)	mg/kg	10	62
Mercury (Hg)	mg/kg	10	ND
Hexavalent Chromium (CrVI)	-	◇	Negative

Notes :

(1)◇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.
Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

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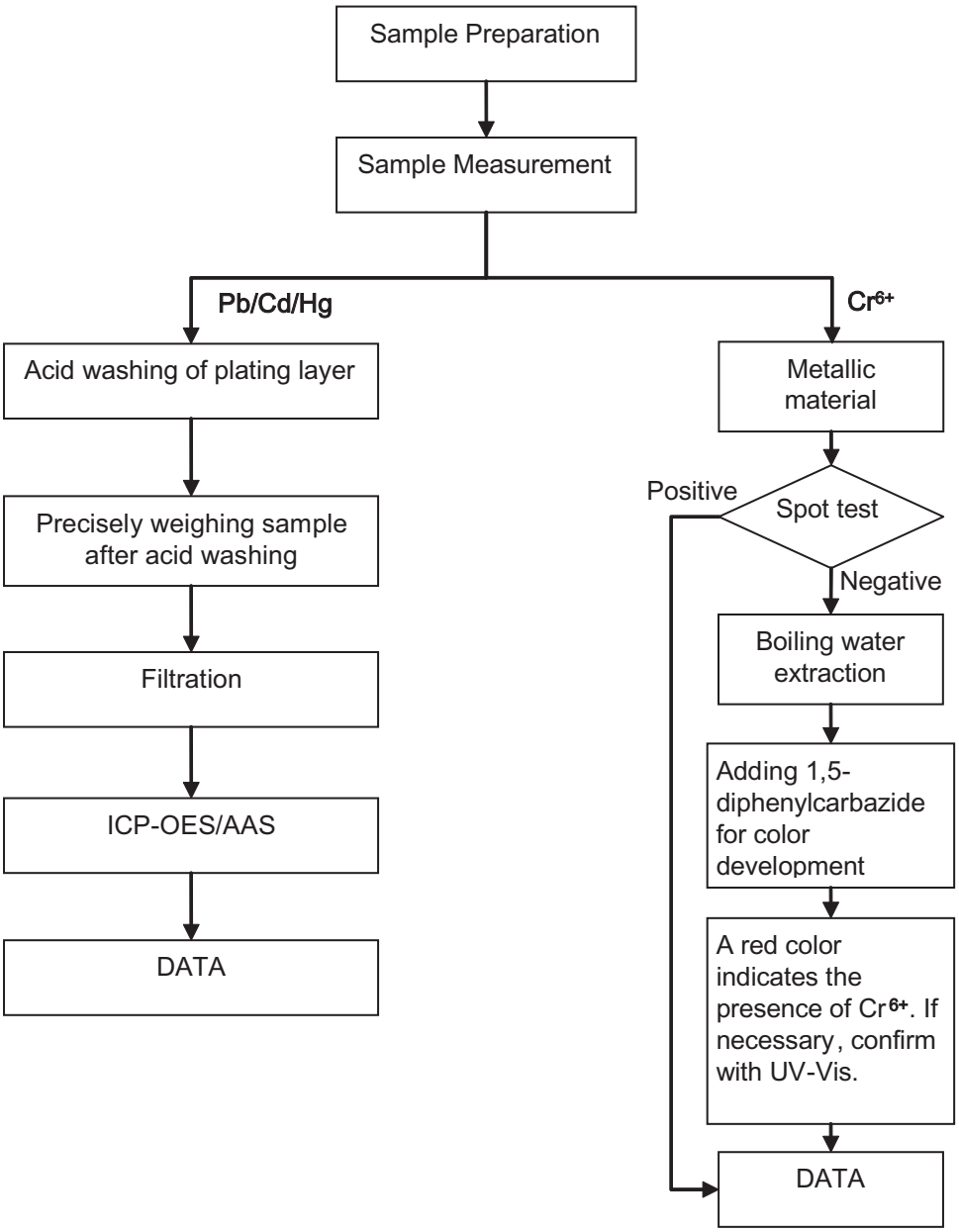
ATTACHMENTS

Plating Pb/Cd/Hg/Cr^{6+} Testing Flow Chart

1) Name of the person who made testing: Michael Tso
2) Name of the person in charge of testing: Adams Yu



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Sample photo:

CAN14-042181.001

SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

Report No. SCL01G064328002

Applicant SHENZHEN CHANGRUN HARDWARE CO., LTD
Address HAOER GONGHE INDUSTRIAL ZONG ,INDUSTRY AVENUE , GONGHE VILLAGE ,SHAJING TOWN ,BAOAN DISTRICT ,SHENZHEN CITY

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

Sample Name	Gold-plating(金)
Sample Received Date	Dec. 20, 2014
Testing Period	Dec. 20, 2014 to Dec. 25, 2014

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample(s).

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

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

****

Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU*	Pass

****

*2011/65/EU is a new version of RoHS Directive (2002/95/EC), which focuses on restriction of the use of certain hazardous substances (Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs)) in electrical and electronic equipment.
Pass means that the results shown on the report do not exceed the limits set by RoHS Directive 2011/65/EU.

Tested by Zhang

Reviewed by Danna

Approved by

Danny Liu
Technical Manager

Date Dec. 25, 2014

No. R167357685

Test Report

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	Refer to IEC 62321-5:2013 Ed.1.0	ICP-OES
Cadmium (Cd)	Refer to IEC 62321-5:2013 Ed.1.0	ICP-OES
Mercury (Hg)	Refer to IEC 62321-4:2013 Ed.1.0	ICP-OES
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis

Test Result(s)

Tested Item(s)	**Result**	**MDL**	**Limit of Directive 2011/65/EU**
Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	/	1000 mg/kg

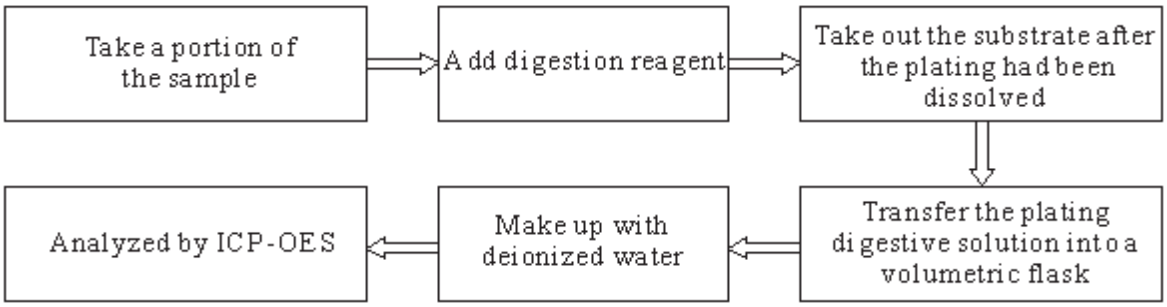
Tested Sample/Part Description Golden plating

Note: **The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.**
-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 50cm^2 sample surface area used.

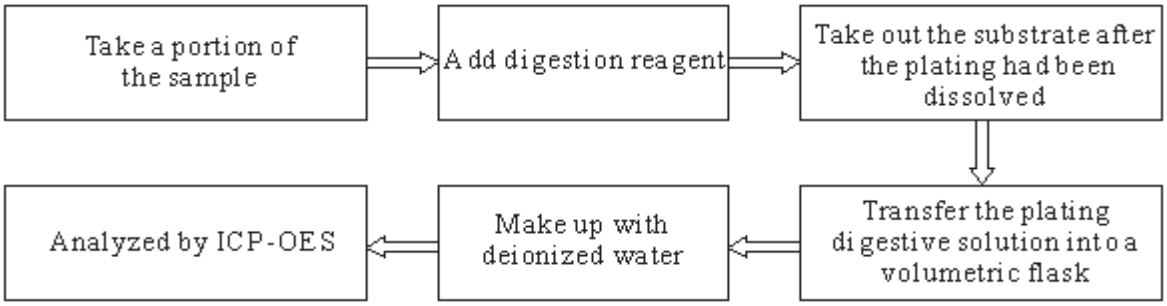
Test Report

Test Process

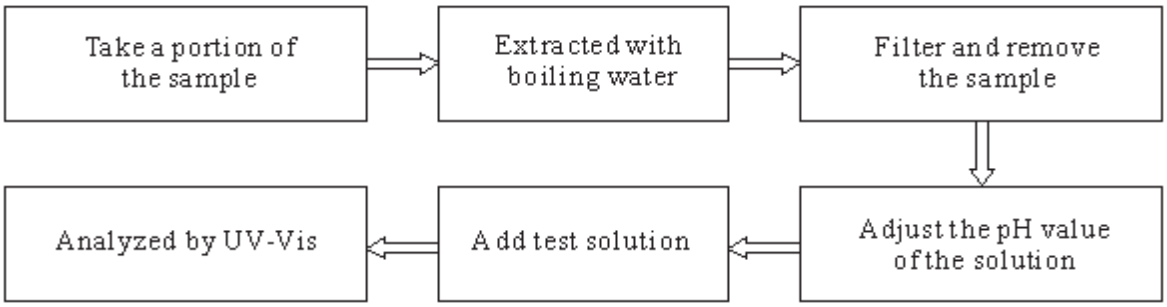
1. Lead (Pb), Cadmium (Cd)



2. Mercury (Hg)



3. Hexavalent Chromium(Cr(VI))



Test Report

Photo(s) of the sample(s)

*** End of report ***

KINGBOARD LAMINATES HOLDINGS LIMITED

2/F.,HARBOUR VIEW 1,NO.12 SCIENCE PARK EAST AVENUE,PHASE II HONG KONG SCIENCE PARK,SHATIN,N.T.
HONG KONG

The following sample(s) was/were submitted and identified on behalf of the clients as : KB-6160

SGS Job No. :	CP14-037658 - GZ
Model No. :	KB-6160
Client Ref. Info. :	KB-6060,KB-6160A/6060A,KB-6160C/6060C,KB-6150/6050,KB-6150C/6050C
Date of Sample Received :	11 Jul 2014
Testing Period :	11 Jul 2014 - 16 Jul 2014
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 of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

Kenny Wang
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN14-112435.001	Yellow sheet

Remarks :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method : (1)With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2)With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3)With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4)With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
(5)With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	*001*
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	10
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	2	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit	MDL	*001*
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II.

Elementary Analysis

Test Method : With reference to US EPA Method 3052:1996, analysis was performed by ICP-OES.

Test Item(s)	Unit	MDL	*001*
Arsenic (As)	mg/kg	10	ND
Antimony (Sb)	mg/kg	10	ND

Asbestos

Test Method : With reference to NIOSH 9002:1994 and NIOSH 9000:1994, Analysis was performed by PLM and XRD.

Test Item(s)	CAS NO.	Unit	MDL	*001*
Chrysotile	012001-29-5	% (m/m)	0.1	Negative
Amosite	012172-73-5	% (m/m)	0.1	Negative
Crocidolite	012001-28-4	% (m/m)	0.1	Negative
Anthophyllite	077536-67-5	% (m/m)	0.1	Negative
Tremolite	077536-68-6	% (m/m)	0.1	Negative
Actinolite	077536-66-4	% (m/m)	0.1	Negative

Notes :

(1)Negative means the absence of asbestos, Positive means the presence of asbestos.

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Organic-tin compounds

Test Method : With reference to ISO 17353: 2004 , analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	*001*
Dibutyl tin (DBT)	mg/kg	0.02	ND
Tributyl tin (TBT)	mg/kg	0.02	ND
Dioctyl tin (DOT)	mg/kg	0.02	ND
Triphenyl tin (TPhT)	mg/kg	0.02	ND

Polynuclear Aromatic Hydrocarbons (PAHs)

Test Method : With reference to ZEK 01.4-08 of German ZLS and its amendments, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	*001*
Naphthalene(NAP)	mg/kg	0.1	ND
Acenaphthylene(ANY)	mg/kg	0.1	ND
Acenaphthene(ANA)	mg/kg	0.1	ND
Fluorene(FLU)	mg/kg	0.1	ND
Phenanthrene(PHE)	mg/kg	0.1	ND
Anthracene(ANT)	mg/kg	0.1	ND
Fluoranthene(FLT)	mg/kg	0.1	ND
Pyrene(PYR)	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	mg/kg	0.1	ND
Chrysene(CHR)	mg/kg	0.1	ND
Benzo(b)fluoranthene(BbF) + Benzo(j)fluoranthene(BjF)	mg/kg	0.1	ND
Benzo(k)fluoranthene(BkF)	mg/kg	0.1	ND

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Test Item(s)	Unit	MDL	*001*
Benzo(e)pyrene(BeP)	mg/kg	0.1	ND
Benzo(a)pyrene(BaP)	mg/kg	0.1	ND
Indeno(1,2,3-c,d)pyrene(IPY)	mg/kg	0.1	ND
Dibenzo(a,h)anthracene(DBA)	mg/kg	0.1	ND
Benzo(g,h,i)perylene(BPE)	mg/kg	0.1	ND
Sum of 18 PAHs	mg/kg	-	ND

ZEK 01.4-08: Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3
	Material indented to be put in the mouth or material for toys with normal skin contact for children aged < 36 months	Materials those are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact).	Materials those are not included in Category 1 or 2, with predictable skin contact up to 30 s (short-term skin contact).
Benzo(a)pyrene (mg/kg)	<0.2**	1	20
Sum of 18 PAH (mg/kg)*	<0.2**	10	200

Notes:

* = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs

** = In case that the maximum values exceed the limits of category 1, but are within the limits of category 2, one may confirm the suitability of the tested material which is indented to be put in the mouth by additional specific migration tests of PAH components based on DIN EN 1186ff and §64 LFGB 80.30-1. The conclusion of the migration test results must be made based on food law criteria.

Formaldehyde

Test Method : With reference to ISO 14184-1:2011, analysis was performed by UV-Vis.

Test Item(s)	Unit	MDL	*001*
Free & Hydrolyzed Formaldehyde	mg/kg	16	ND

Hexabromocyclododecane (HBCDD)

Test Method : Determination of HBCDD by GC-MS based on IEC 62321:2008.

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Test Item(s)	Unit	MDL	*001*
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance restriction.

PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid)

Test Method : With reference to US EPA Method 3550C: 2007, analysis was performed by HPLC-MS.

Test Item(s)	Unit	MDL	001
Perfluorooctane Sulfonates (PFOS) and related Acid,Metal Salt and Amide	mg/kg	10	ND
Perfluorooctanoic Acid (PFOA)	mg/kg	10	ND

Notes :

For reference: commission regulation (EU) No 757/2010 amending regulation (EC) No 850/2004:
(1) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances or in preparations.
(2) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS in semi-finished products or articles, or parts thereof, if the concentration of PFOS is lower than 0,1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is lower than 1µg /m2 of the coated material.

Phthalate

Test Method : With reference to EN14372: 2004. Analysis was performed by GC-MS.

Test Item(s)	CAS NO.	Unit	MDL	*001*
Dibutyl Phthalate (DBP)	84-74-2	%(w/w)	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%(w/w)	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%(w/w)	0.003	ND

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Test Item(s)	CAS NO.	Unit	MDL	*001*
Diisononyl Phthalate (DINP)	28553-12-0 / 68515-48-0	%(w/w)	0.010	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%(w/w)	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 / 68515-49-1	%(w/w)	0.010	ND
Dimethyl Phthalate (DMP)	131-11-3	%(w/w)	0.003	ND
Diethyl Phthalate (DEP)	84-66-2	%(w/w)	0.003	ND
Diisobutyl Phthalate (DIBP)	84-69-5	%(w/w)	0.003	ND
Dinonyl Phthalate (DNP)	84-76-4	%(w/w)	0.003	ND
Diisooctyl Phthalate (DiOP)	27554-26-3	%(w/w)	0.010	ND
Dipropyl Phthalate (DPrP)	131-16-8	%(w/w)	0.003	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	%(w/w)	0.003	ND
Dipentyl Phthalate (DPP)	131-18-0	%(w/w)	0.003	ND
Dibenzyl Phthalate (DBzP)	523-31-9	%(w/w)	0.003	ND
Diphenyl Phthalate (DPhP)	84-62-8	%(w/w)	0.003	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	%(w/w)	0.003	ND

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Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC:
Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.
(2)DBP,BBP,DEHP Reference information: Entry 51 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC):
i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles.
ii) Toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.
(3)DINP, DNOP, DIDP Reference information: Entry 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC).
i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children.
ii) Such toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.
Please refer to Regulation (EC) No 552/2009 to get more detail information

Benzotriazole UV Absorbant

Test Method : With reference to US EPA 3550C: 2007, analysis was performed by GC-MS.

Test Item(s)	CAS NO.	Unit	MDL	*001*
2-(3,5-Di-tert-butyl-2-hydroxyphenyl) benzotriazole (UV-320)	3846-71-7	mg/kg	5	ND
2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)-5-chloro benzotriazole	3864-99-1	mg/kg	5	ND
2-(2'-hydroxy-3',5'-di-tert-amylphenyl) benzotriazole (UV-328)	25973-55-1	mg/kg	5	ND
TinUVin 350 (UV-350)	36437-37-3	mg/kg	5	ND

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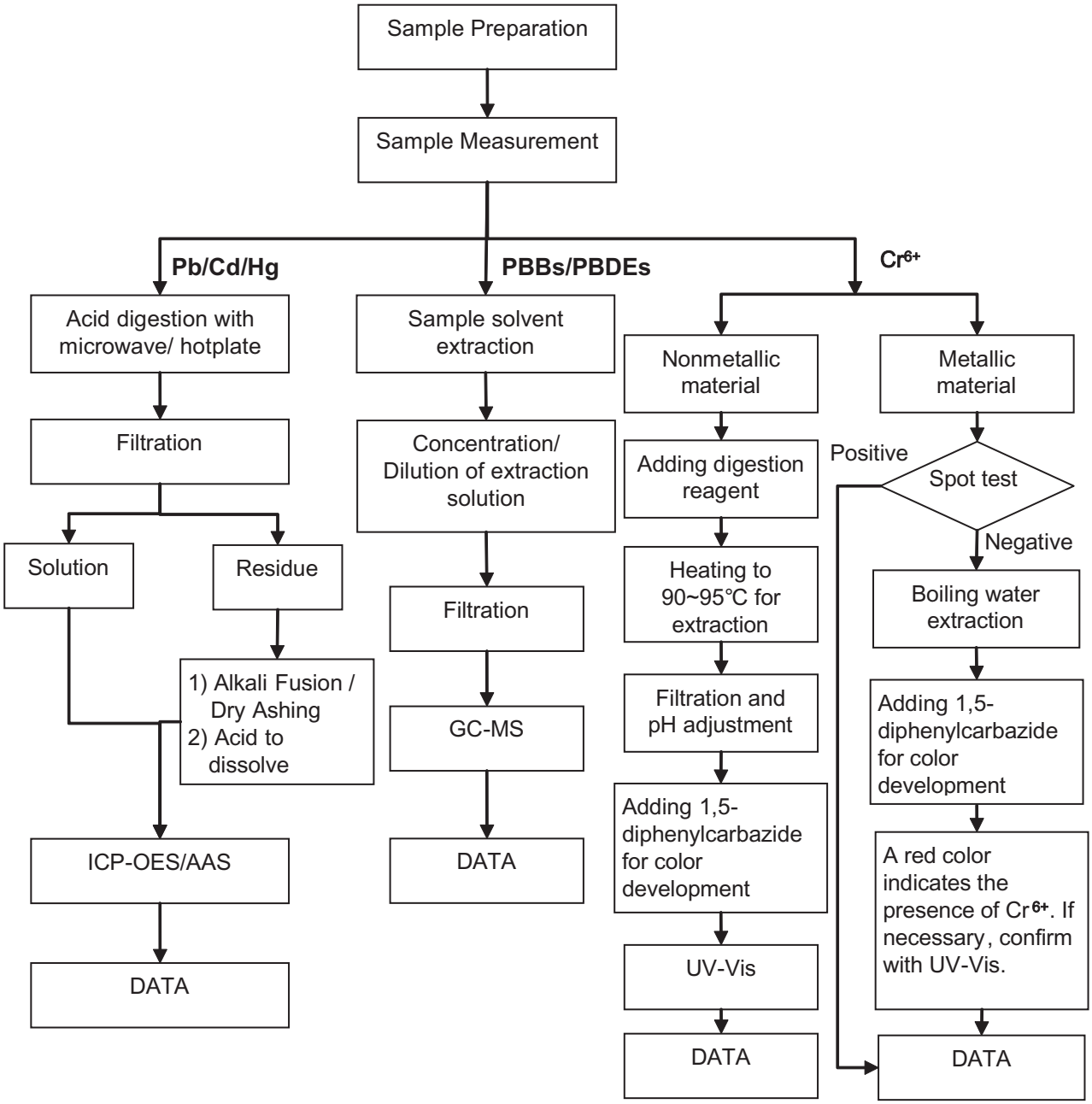
ATTACHMENTS

RoHS Testing Flow Chart

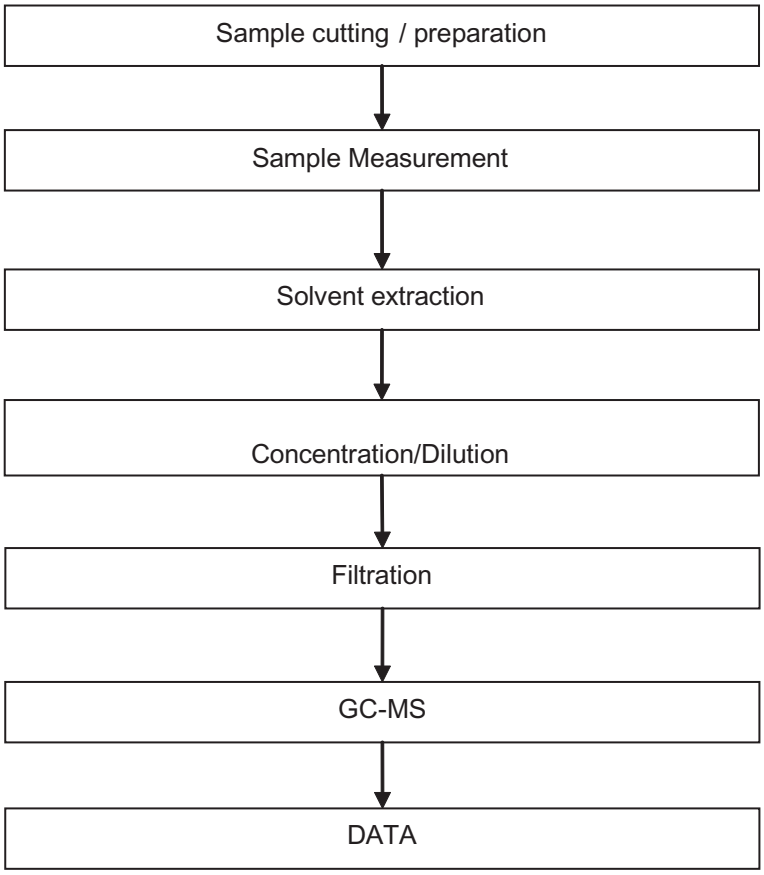
1) Name of the person who made testing: Bruce Xiao / Sunny Hu
2) Name of the person in charge of testing: Bella Wang / Cutey Yu
3) These samples were dissolved totally by pre -conditioning method according to below flow chart (Cr^{6+} and PBBs/PBDEs test method excluded).



ATTACHMENTS

HBCDD Testing Flow Chart

1) Name of the person who made testing: Sunny Hu
2) Name of the person in charge of testing: Cutey Yu



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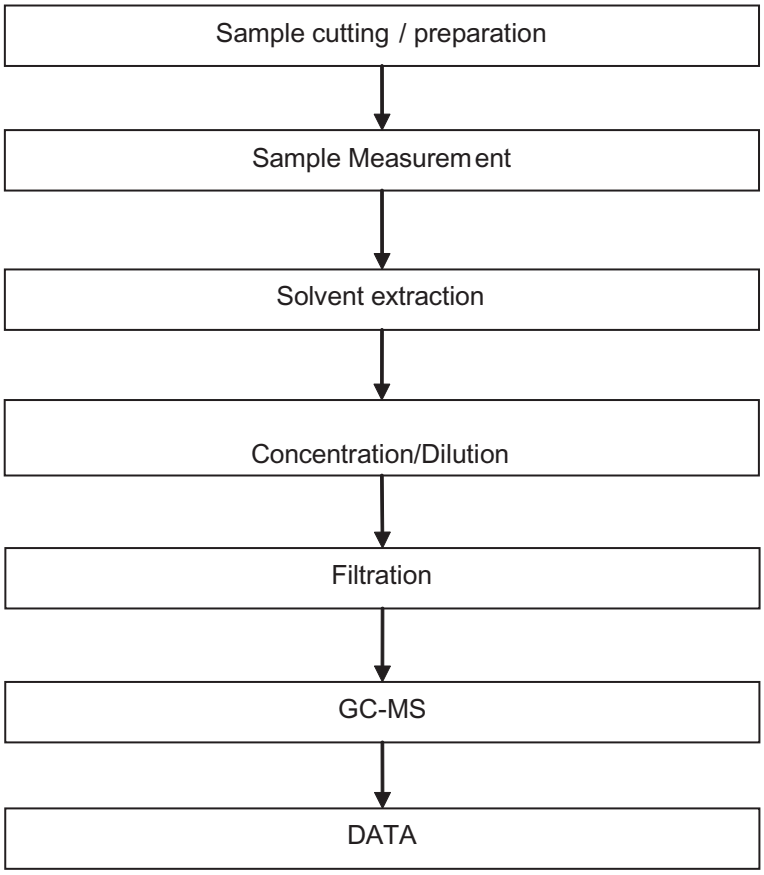
ATTACHMENTS

Phthalates Testing Flow Chart

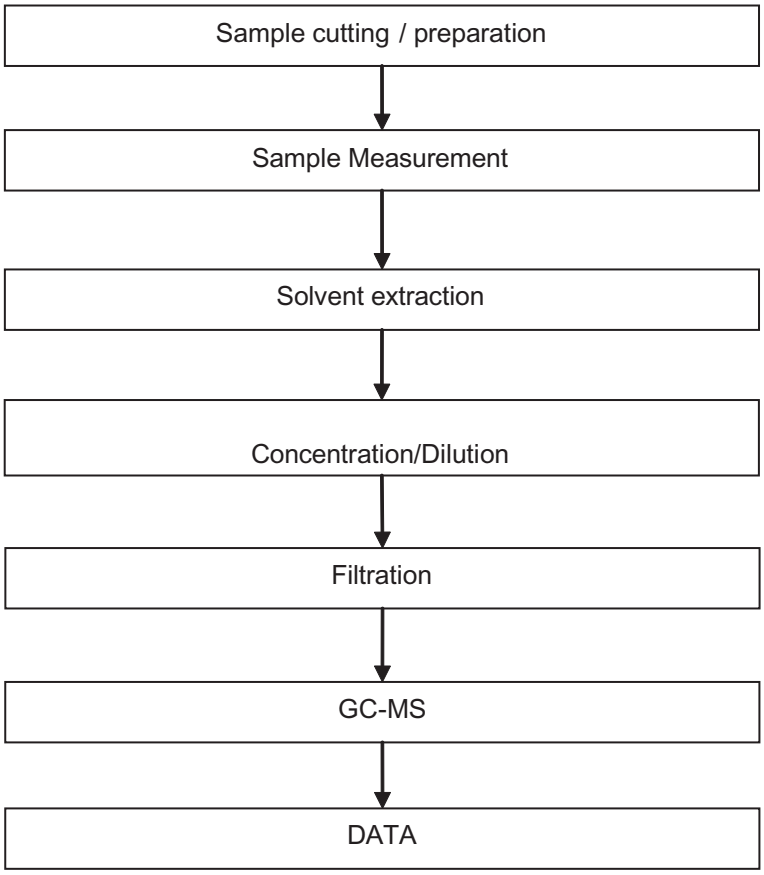
1) Name of the person who made testing: Sunny Hu
2) Name of the person in charge of testing: Cutey Yu



ATTACHMENTS

PAHs Testing Flow Chart

1) Name of the person who made testing: Sunny Hu
2) Name of the person in charge of testing: Cutey Yu



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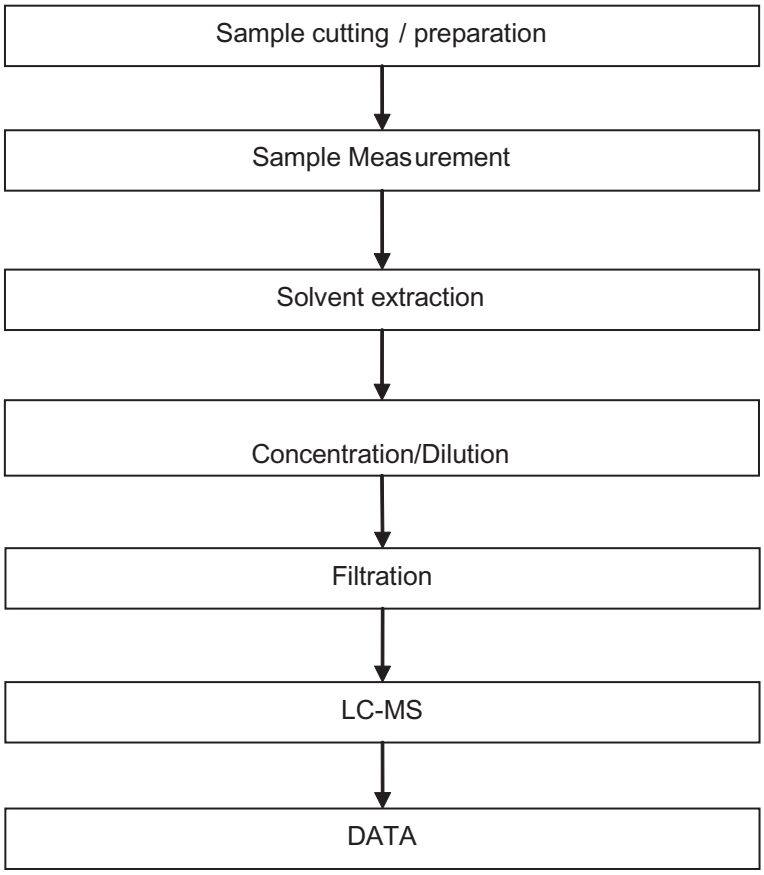
ATTACHMENTS

PFOA / PFOS Testing Flow Chart

1) Name of the person who made testing: Zhihong Wang
2) Name of the person in charge of testing: Cutey Yu



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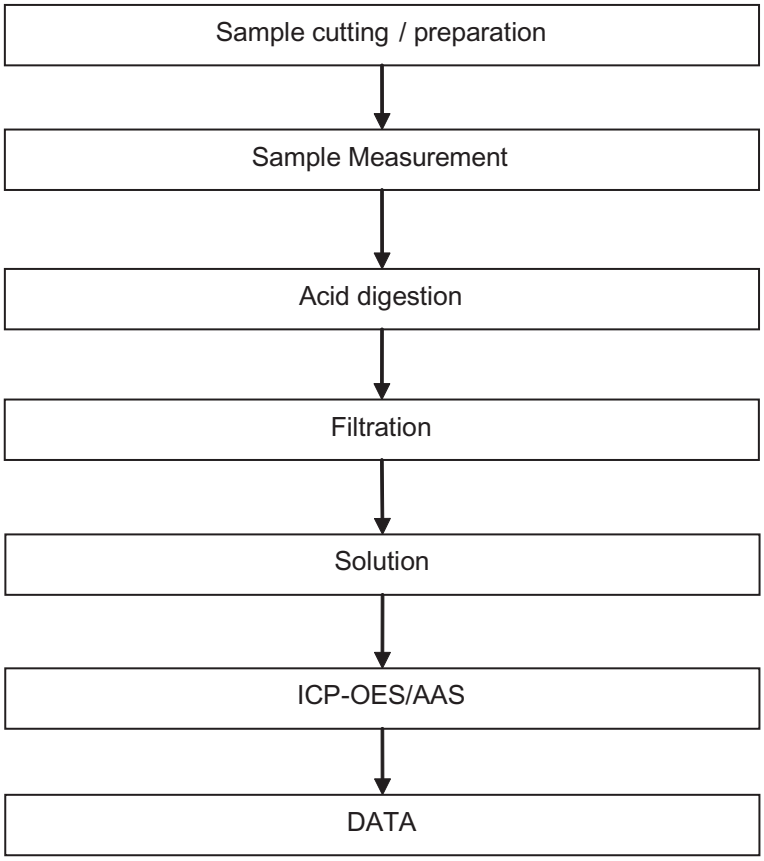
ATTACHMENTS

Elementary Testing Flow Chart

1) Name of the person who made testing : Bruce Xiao
2) Name of the person in charge of testing : Bella Wang



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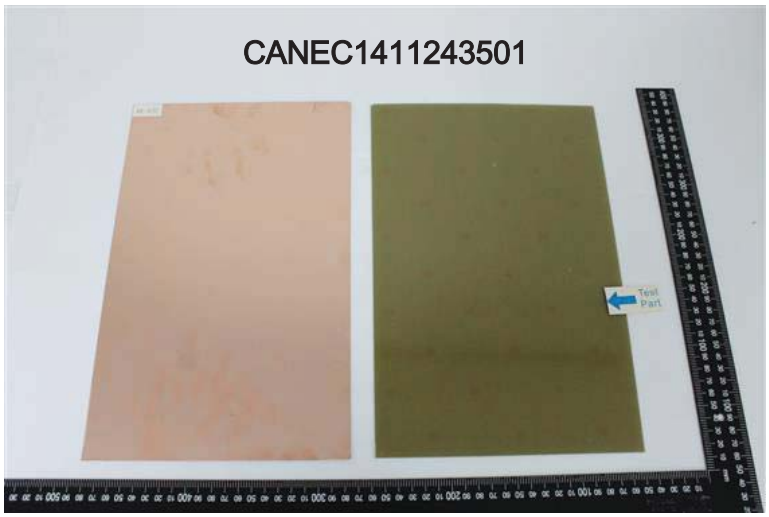
Sample photo:



CAN14-112435.001

SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

Report No. RHS01G006955002 Page 1 of 6

Applicant SHENZHEN RONGDA PHOTOSENSITIVE SCIENCE & TECHNOLOGY CO., LTD

Address FLOOR 1-3 R&D BUILDING ,FIRST SCIENCE PARK,FUYONG LAKE LIXIN,FUYONGSTREET,BAO'AN DISTRICT,SHENZHEN CITY

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

Sample Name	Liquid photosensitive solder resist ink
Part No.	H-8100
Item/Lot No.	14000314
Color	black
Sample Received Date	Mar. 19, 2014
Testing Period	Mar. 19, 2014 to Mar. 21, 2014

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Hexabromocyclododecane(HBCDD), Phthalates in the submitted sample(s).

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

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

****

Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU*	Pass

****

*2011/65/EU is a new version of RoHS Directive (2002/95/EC), which focuses on restriction of the use of certain hazardous substances (Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs)) in electrical and electronic equipment.
Pass means that the results shown on the report do not exceed the limits set by RoHS Directive 2011/65/EU.

Tested by Rick Lin

Reviewed by Vargas He

Approved by

Danny Liu
Technical Manager

Date Mar. 21, 2014

No. 1012268699

Test Report

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead(Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES
Cadmium(Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES
Mercury(Hg)	IEC 62321-4:2013 Ed.1.0	ICP-OES
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex C	UV-Vis
Polybrominated Biphenyls(PBBs)	IEC 62321:2008 Ed.1 Annex A	GC-MS
Polybrominated Diphenyl Ethers(PBDEs)	IEC 62321:2008 Ed.1 Annex A	GC-MS
Phthalates	Refer to EN 14372:2004(E)	GC-MS
Hexabromocyclododecane(HBCDD)	Refer to US EPA 3540C:1996	GC-MS

Test Result(s)

Tested Item(s)	**Result**	**MDL**	**Limit of Directive 2011/65/EU**
Lead(Pb)	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
Mercury(Hg)	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium(Cr(VI))	N.D.	2 mg/kg	1000 mg/kg

Tested Item(s)	**Result**	**MDL**	**Limit of Directive 2011/65/EU**
Polybrominated Biphenyls(PBBs)			
Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	5 mg/kg	

Test Report

Tested Item(s)	Result	MDL	Limit of Directive 2011/65/EU
Polybrominated Diphenyl Ethers(PBDEs)			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	5 mg/kg	

Tested Item(s)	Result	MDL
Hexabromocyclododecane (HBCDD)	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
Phthalates		
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butylbenzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-2-ethylhexyl phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg

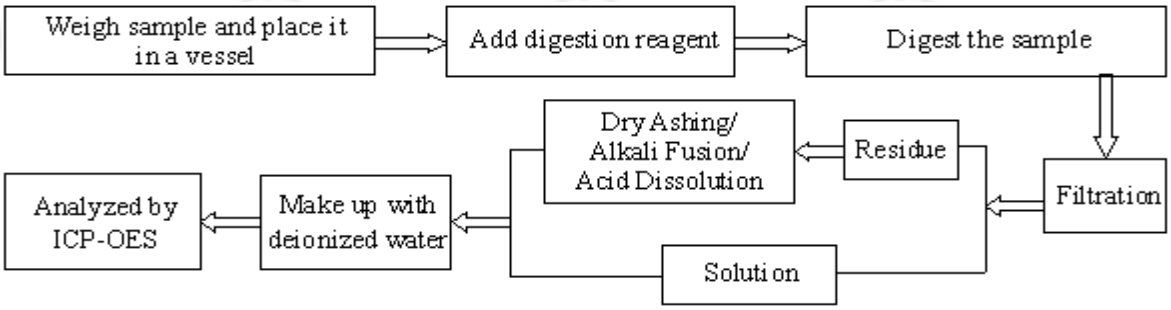
Tested Sample/Part Description Black ink

Note: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million

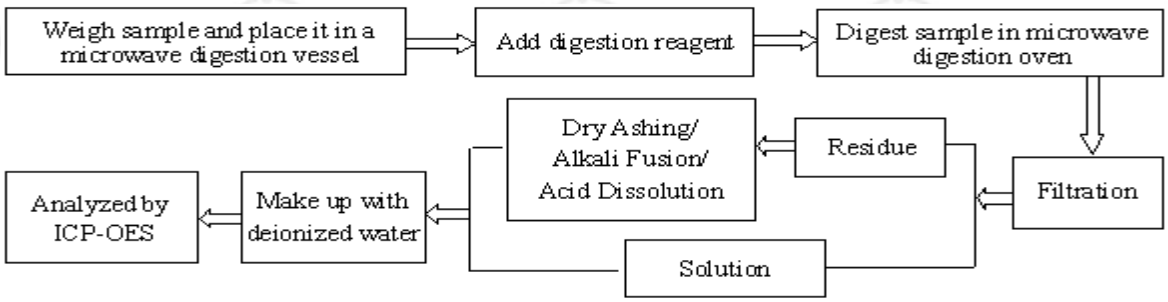
Test Report

Test Process

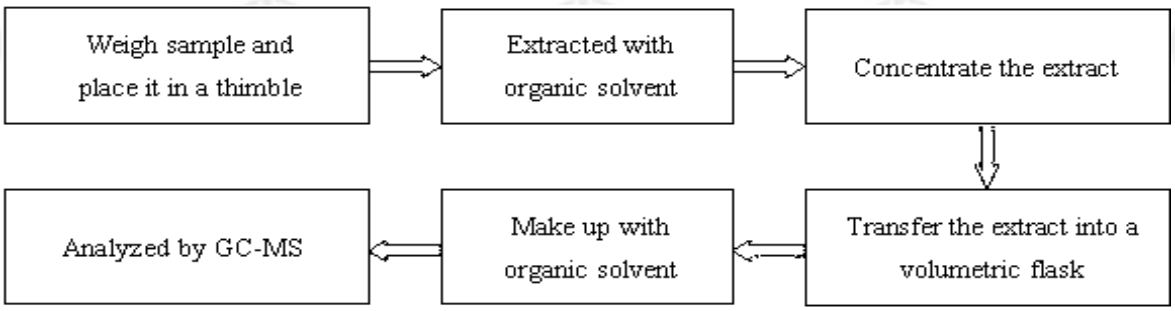
1. Lead(Pb), Cadmium(Cd)



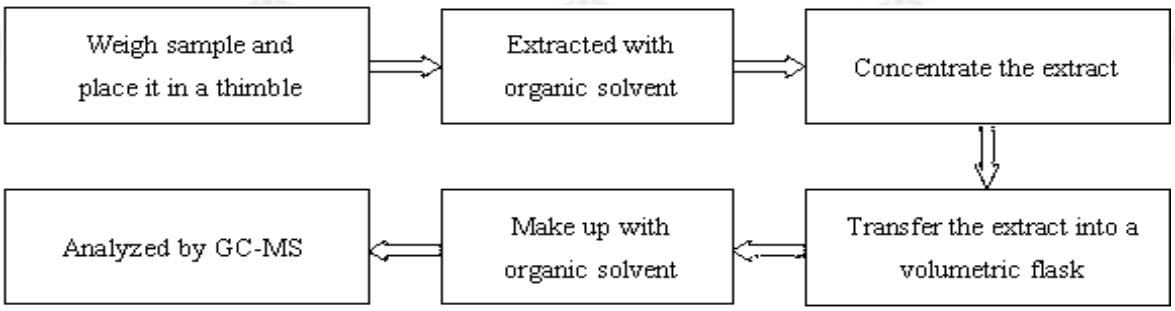
2. Mercury(Hg)



3. Phthalates

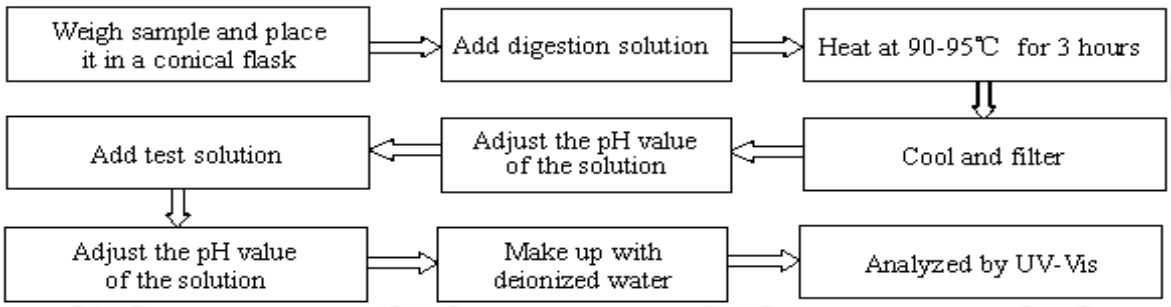


4. Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs)

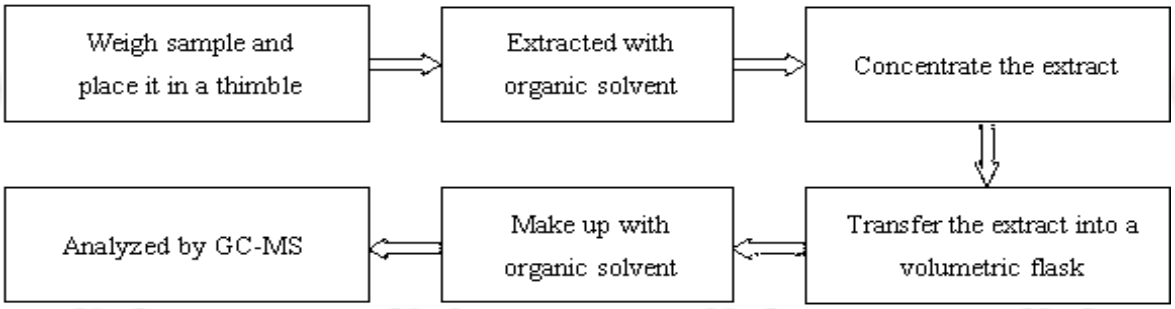


Test Report

5. Hexavalent Chromium(Cr(VI))



6. Hexabromocyclododecane(HBCDD)



Test Report

Photo(s) of the sample(s)

*** End of report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

测试报告

No. CANEC1406658702

建滔（连州）铜箔有限公司

中国广东省连州市城北工业园建滔工业园

以下测试之样品是由申请者所提供及确认：电解铜箔

SGS工作编号：	CP14-023035 - GZ
样品接收日期：	2014年05月06日
测试周期：	2014年05月06日 - 2014年05月08日
测试要求：	根据客户要求测试
测试方法：	请参见下一页
测试结果：	请参见下一页
结论：	基于所送样品进行的测试，镉、铅、汞、六价铬、多溴联苯(PBB)、多溴二苯醚(PBDE)的测试结果符合欧盟RoHS指令2002/95/EC的重订指令2011/65/EU附录II的限值要求。

通标标准技术服务有限公司

授权签名

梁康宁

Alkene_Liang梁康宁

批准签署人

备注:本报告是编号为CANEC1406658701报告的中文版本

测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
SN1	CAN14-066587.001	带橙色背面的铜色箔

备注 :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2011/65/EU

测试方法 : (1)参考IEC 62321-5:2013，用ICP-OES测定镉的含量
(2)参考IEC 62321-5:2013，用ICP-OES测定铅的含量
(3)参考IEC 62321-4:2013，用ICP-OES测定汞的含量
(4)参考IEC 62321:2008，用点测试法/紫外-可见分光光度计比色法测定六价铬的含量
(5)参考IEC 62321:2008，用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量

测试项目	限值	单位	MDL	*001*
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))	-	-	◇	阴性
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND

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测试项目	限值	单位	MDL	*001*
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND

备注 :

(1) 最大允许极限值引用自指令2011/65/EU 附录II.

(2) ◇点测试法:

阴性= 未检测到六价铬, 阳性= 检测到六价铬;

(当点测试结果为阴性或无法确定时,将采用沸水萃取法作进一步的结果验证.)

◇沸水萃取法:

阴性= 未检测到六价铬

阳性= 检测到六价铬; 表明50 cm²表面积的被测试样品的沸水萃取液中六价铬的浓度等于或大于0.02 mg/kg

针对金属表面的防腐涂层: 由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅代表测试时样品的状态.

卤素

测试方法 : 参照EN 14582:2007方法测定, 采用IC进行分析.

测试项目	单位	MDL	*001*
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

六溴环十二烷(HBCDD)

测试方法 : 参考IEC 62321:2008， 用GC-MS分析。

测试项目	单位	MDL	*001*
六溴环十二烷(HBCDD)	mg/kg	10	ND

备注 :

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(1) 参考信息：RoHS指令2002/95/EC的重订指令2011/65/EU：
六溴环十二烷(HBCDD) 被列为需优先进行风险评估和考虑进行限制的物质。

邻苯二甲酸盐(或酯)

测试方法： 参考EN 14372: 2004的方法测定, 采用GC-MS进行分析.

测试项目	CAS NO.	单位	MDL	*001*
邻苯二甲酸二丁酯 (DBP)	84-74-2	%(w/w)	0.003	ND
邻苯二甲酸丁酯苄酯 (BBP)	85-68-7	%(w/w)	0.003	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	117-81-7	%(w/w)	0.003	ND
邻苯二甲酸二异壬酯 (DINP)	28553-12-0 / 68515-48-0	%(w/w)	0.010	ND
邻苯二甲酸二正辛酯 (DNOP)	117-84-0	%(w/w)	0.003	ND
邻苯二甲酸二异癸酯 (DIDP)	26761-40-0 / 68515-49-1	%(w/w)	0.010	ND
邻苯二甲酸二甲酯 (DMP)	131-11-3	%(w/w)	0.003	ND
邻苯二甲酸二乙酯 (DEP)	84-66-2	%(w/w)	0.003	ND
邻苯二甲酸二异丁酯 (DIBP)	84-69-5	%(w/w)	0.003	ND
邻苯二甲酸二壬酯 (DNP)	84-76-4	%(w/w)	0.003	ND
邻苯二甲酸二异辛酯 (DiOP)	27554-26-3	%(w/w)	0.010	ND

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测试项目	CAS NO.	单位	MDL	*001*
邻苯二甲酸二丙酯 (DPrP)	131-16-8	%(w/w)	0.003	ND
邻苯二甲酸二环己酯(DCHP)	84-61-7	%(w/w)	0.003	ND
邻苯二甲酸二戊酯 (DPP)	131-18-0	%(w/w)	0.003	ND
邻苯二甲酸二苄酯 (DBzP)	523-31-9	%(w/w)	0.003	ND
邻苯二甲酸二苯酯 (DPhP)	84-62-8	%(w/w)	0.003	ND
邻苯二甲酸二正己酯(DnHP)	84-75-3	%(w/w)	0.003	ND

备注：

(1) DBP, BBP, DEHP 参考信息: 1907/2006/EC Reach 附录XVII的修正指令——552/2009/EC 第51条 (前身为2005/84/EC) 的要求:
i) 不允许DBP，BBP, DEHP 质量浓度高于0.1%的可塑性物料用于玩具和儿童护理品.
ii) 当玩具和儿童护理品中的可塑性物料含DBP, BBP, DEHP 质量浓度高于0.1%时,不得投放市场.
详细信息请参见Regulation (EC) No 552/2009

(2) DINP, DNOP, DIDP 参考信息: 1907/2006/EC Reach 附录XVII的修正指令——552/2009/EC 第52条 (前身为2005/84/EC) 的要求:
i) 不允许DINP, DNOP, DIDP 质量浓度高于0.1%的可塑性物料用于可放入儿童口中的玩具和儿童护理品.
ii) 当可放入儿童口中的玩具和儿童护理品中的可塑性物料含DINP, DNOP, DIDP 质量浓度高于0.1%时,不得投放市场.
详细信息请参见Regulation (EC) No 552/2009.

备注: 本报告中除六价铬外的测试结果引用自报告CANEC1405993603.

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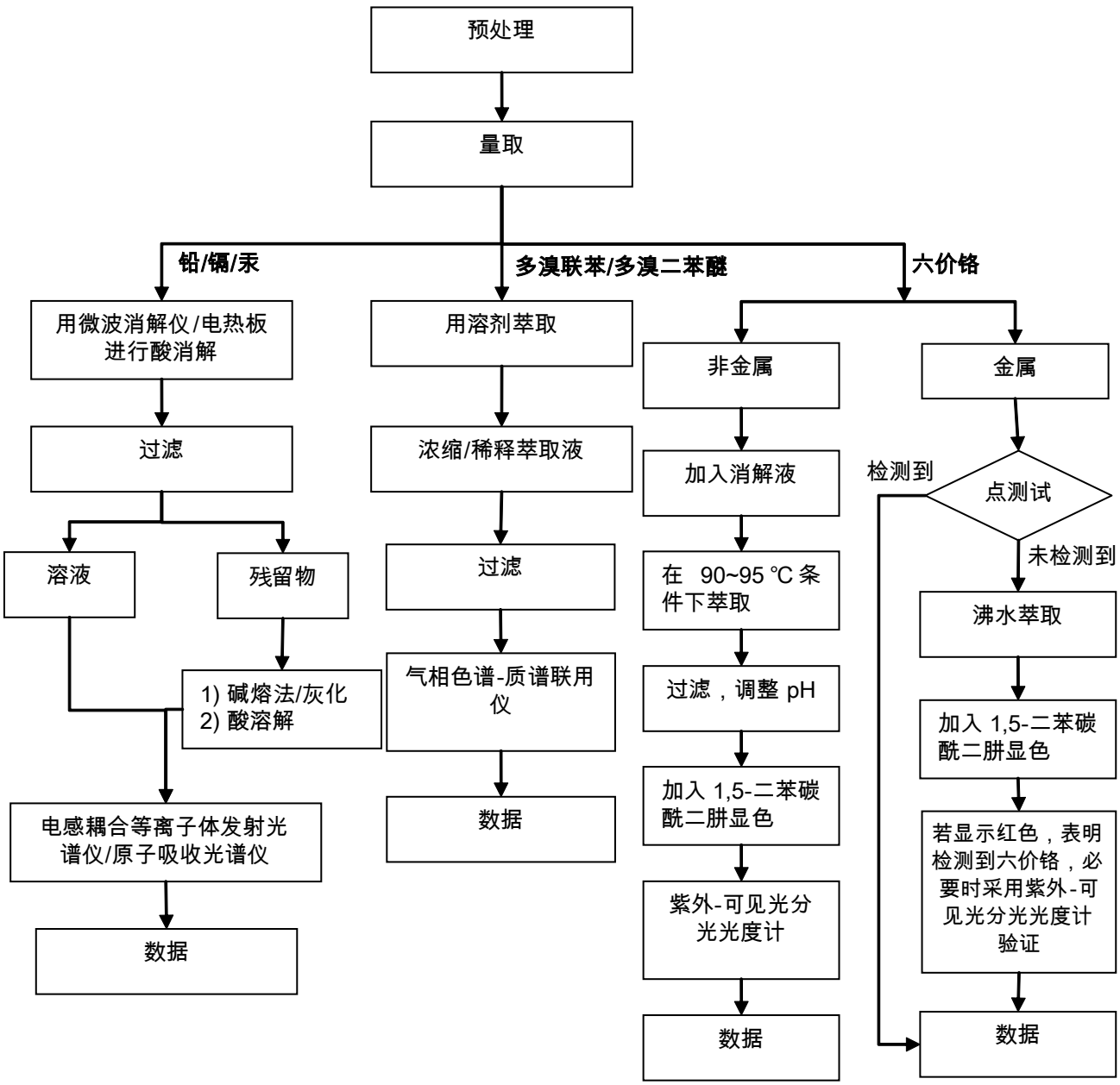
附件

RoHS 测试流程图

1) 分析人员：曹阳 / 余晓璐
2) 项目负责人：余奕东 / 魏红
3) 样品按照下述流程被完全消解（六价铬和多溴联苯 /多溴二苯醚测试除外）。



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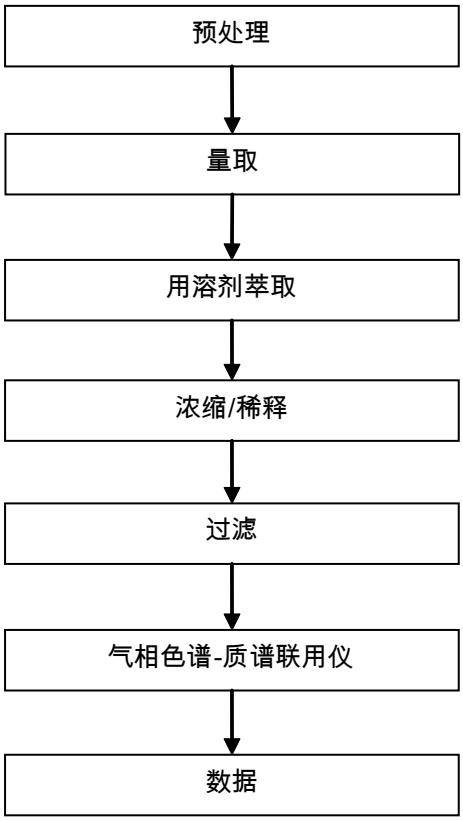
附件

Phthalates 测试流程图

1) 分析人员：刘琼
2) 项目负责人：魏红



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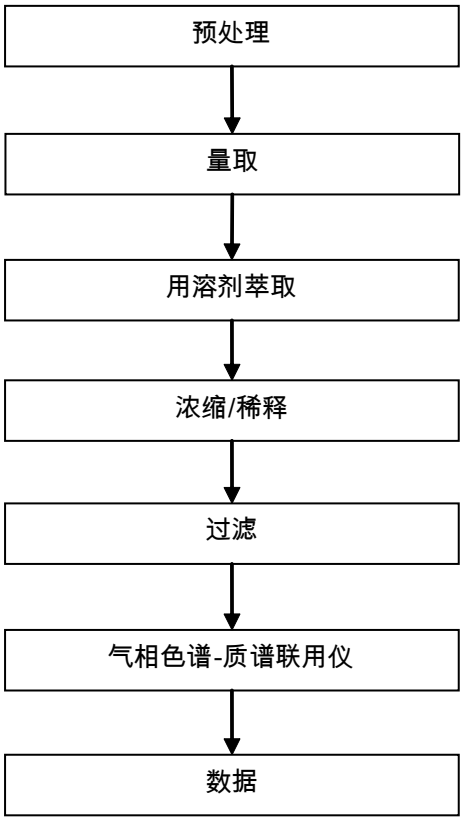
附件

HBCDD 测试流程图

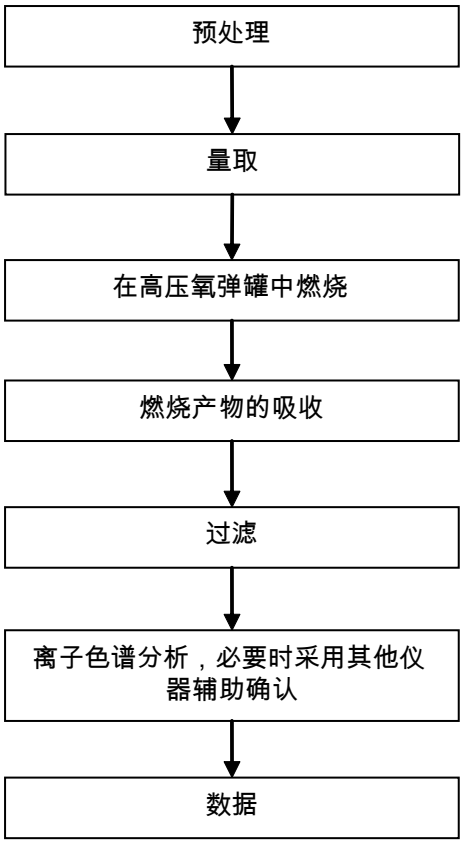
1) 分析人员：余晓璐
2) 项目负责人：魏红



附件

Halogen 测试流程图

1) 分析人员：汪丹
2) 项目负责人：余奕东



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样品照片:

CAN14-066587.001

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*** 报告完 ***

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Test Report

No. : CE/2015/13111 Date : 2015/01/26

DEXERIALS CORPORATION
8F, 1-11-2, OSAKI, SHINAGAWA-KU, TOKYO, 141-0032 JAPAN

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

Sample Description	:	ADHESIVE
Style/Item No.	:	G9000 SERIES(G9000, G9000 C, G9000-SY, G9000W, G9010, G9011, G9012)
The Testing Sample	:	G9000
Lot No	:	3M01
Sample Receiving Date	:	2015/01/19
Testing Period	:	2015/01/19 TO 2015/01/26

==========

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

(2) As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine contents in the submitted sample.

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

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

SGS TAIWAN LTD. SGS TAIWAN

Troy Chang / Manager – Tech
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

DEXERIALS CORPORATION
8F, 1-11-2, OSAKI, SHINAGAWA-KU, TOKYO, 141-0032 JAPAN

Test Result(s)

PART NAME No.1 : SEMI-TRANSPARENT DOUBLE SIDED ADHESIVE (EXCLUDING THE RELEASE LINER)

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

DEXERIALS CORPORATION
8F, 1-11-2, OSAKI, SHINAGAWA-KU, TOKYO, 141-0032 JAPAN

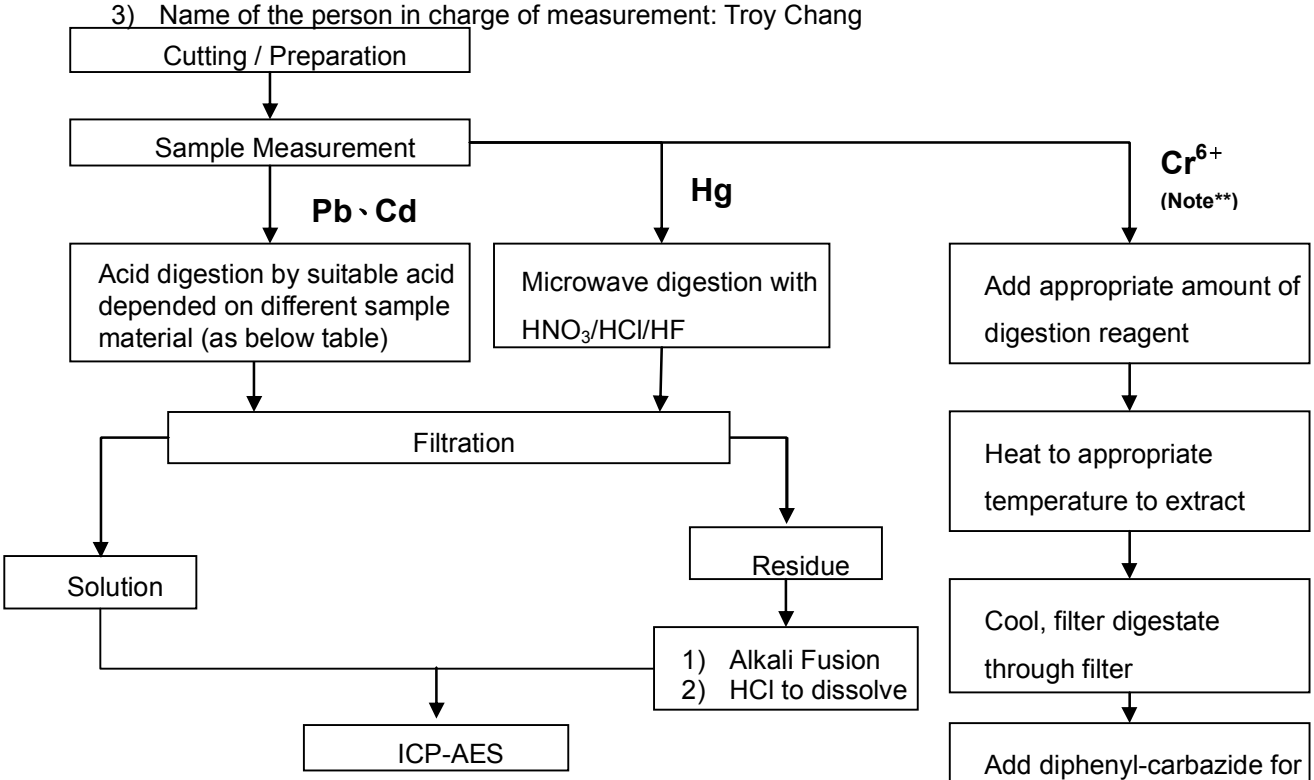
Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)			50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)			50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)			50	n.d.

Note：

1. mg/kg = ppm；0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

DEXERIALS CORPORATION
8F, 1-11-2, OSAKI, SHINAGAWA-KU, TOKYO, 141-0032 JAPAN

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)
2) Name of the person who made measurement: Climbgreat Yang
3) Name of the person in charge of measurement: Troy Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO_3, HCl, HF, H_2O_2
Glass	HNO_3/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO_3
Plastic	H_2SO_4, H_2O_2, HNO_3, HCl
Others	Added appropriate reagent to total digestion

Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.
(2) For metallic material, add pure water and heat to boiling.

DEXERIALS CORPORATION
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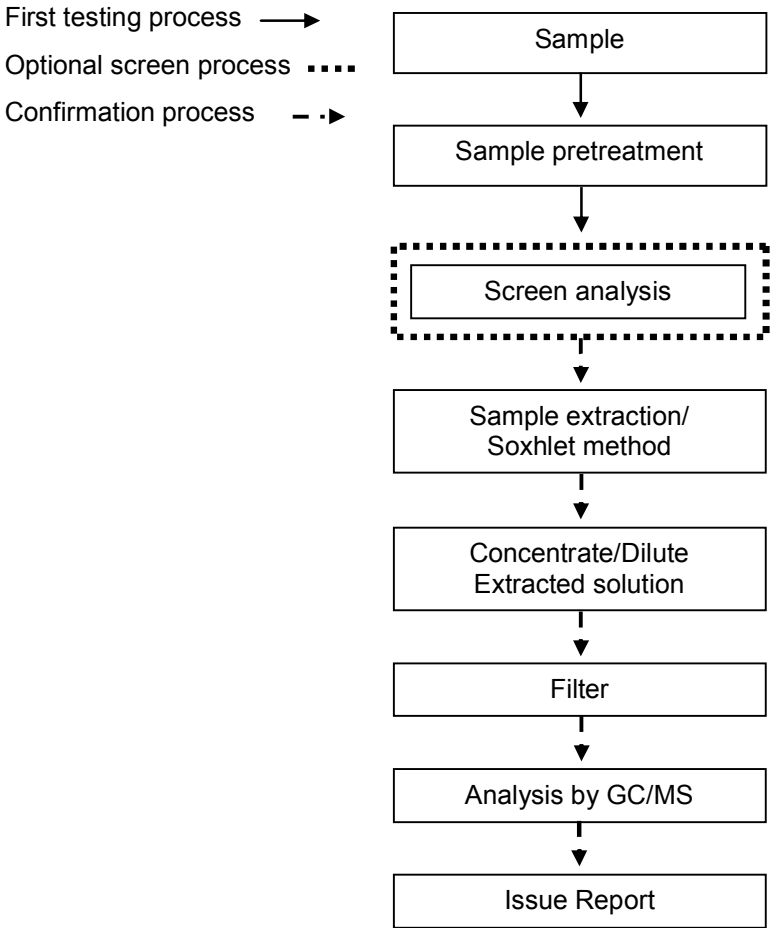
PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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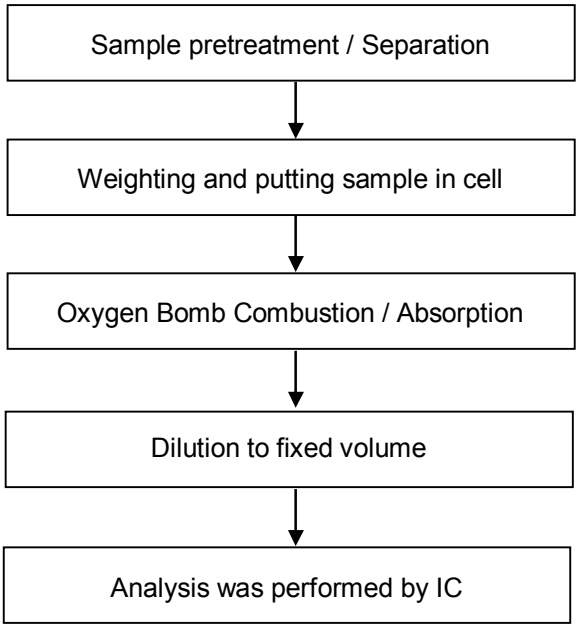
Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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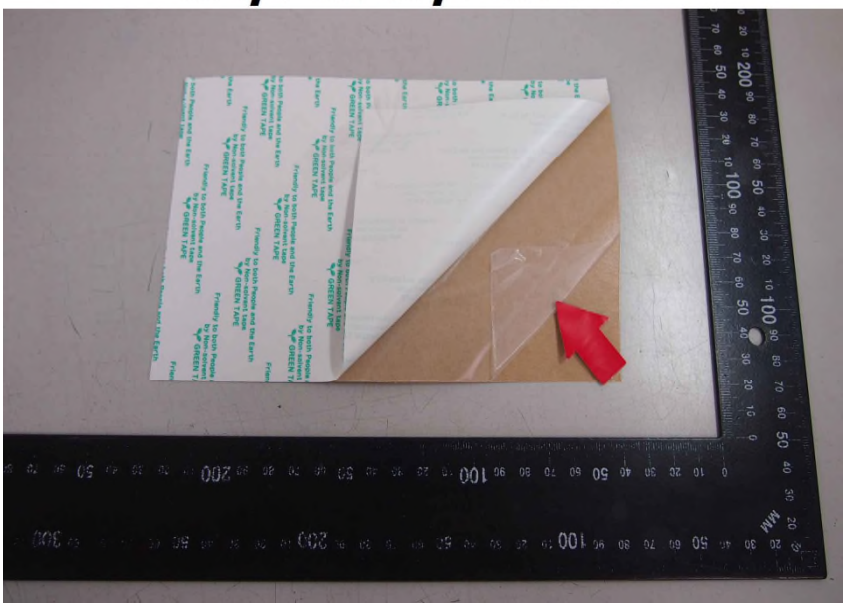
*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

CE/2015/13111



** End of Report **

WIESON TECHNOLOGIES CO., LTD.

WIESON 3D CHAMBER TEST REPORT

Customer: 泰金寶

Project Name: **XYZ Junior**

WIESON P/N: **GY196HT0131C-002**

Antenna Type: **Internal 2.4G**

Version No. : **03**

Contact Information:
Tel:02-2647-1896

PM: **Eison Chou**
Eison@wieson.com
Ext.6377
Engineer: **wippen Li**
wippen@wieson.com
Ext.6712

WIESON TECHNOLOGIES CO., LTD.

INDEX.

Revision History

Revision	Date	Engineer	Description
01	2014/10/21	Wippen Li	NEW RELEASE
02	20141021	Wippen Li	update
03	2014/11/21	Wippen Li	new Location

I. Summary：

This report to account for the measurement setup and result of the Antenna.
The measurement setup includes s-parameter, pattern, and gain measurement.
The measured data for Antenna are presented and analysis.

II. S-Parameter Measurement：

A. Reflection coefficient :

(a) Instrument：Network Analyzer.

(b) Setup：

(1) Calibrate the Network Analyzer by one port calibration using O.S.L. calibration kits.
(2) Connect the antenna under test to the Network Analyzer.
(3) Measure the S11(reflection coefficient) shown in Fig. 1.
(4) Generally, the S11 is less than –10dB to ensure the 90% power into antenna and only less than 10% power back to system.

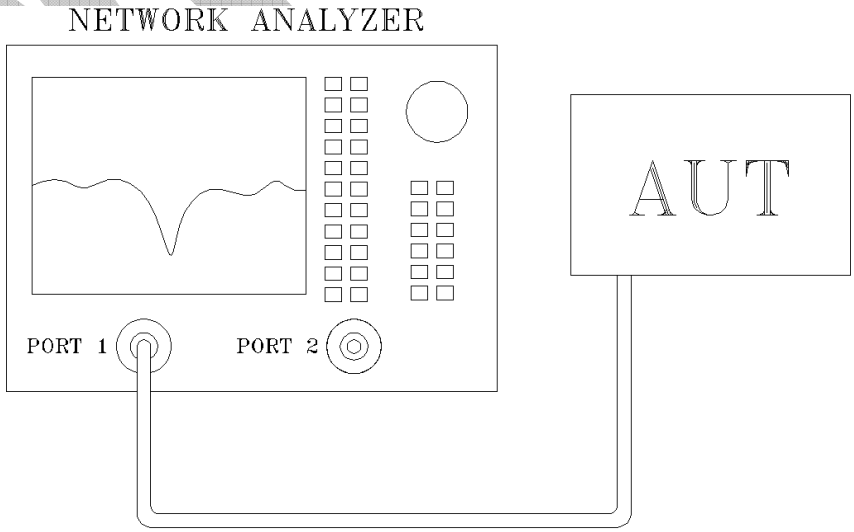
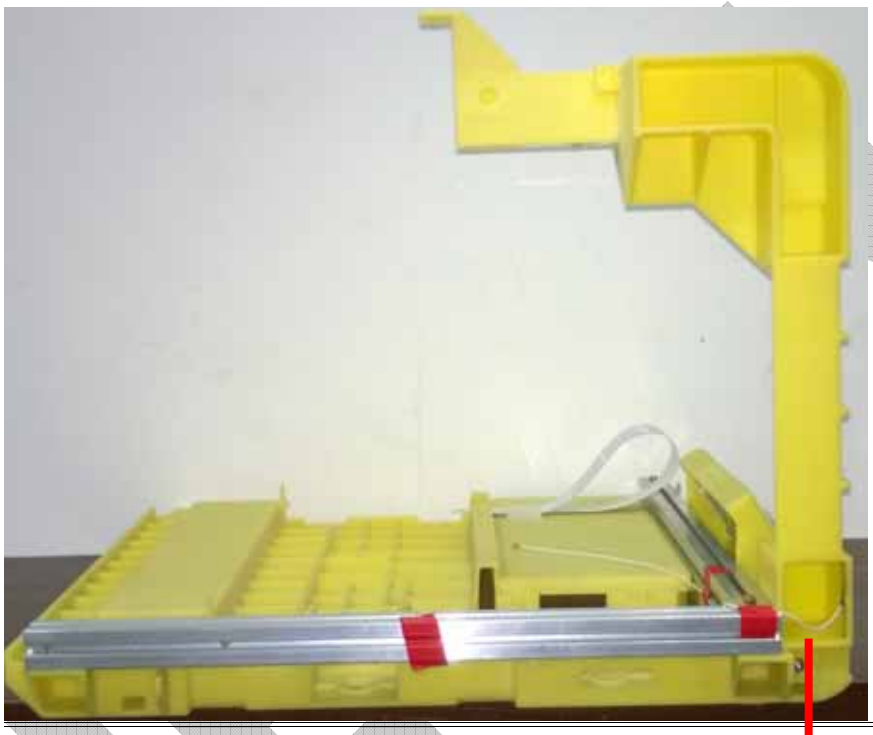


Fig.1 Antenna measured in Network Analyzer

III. Antenna Location Photos：

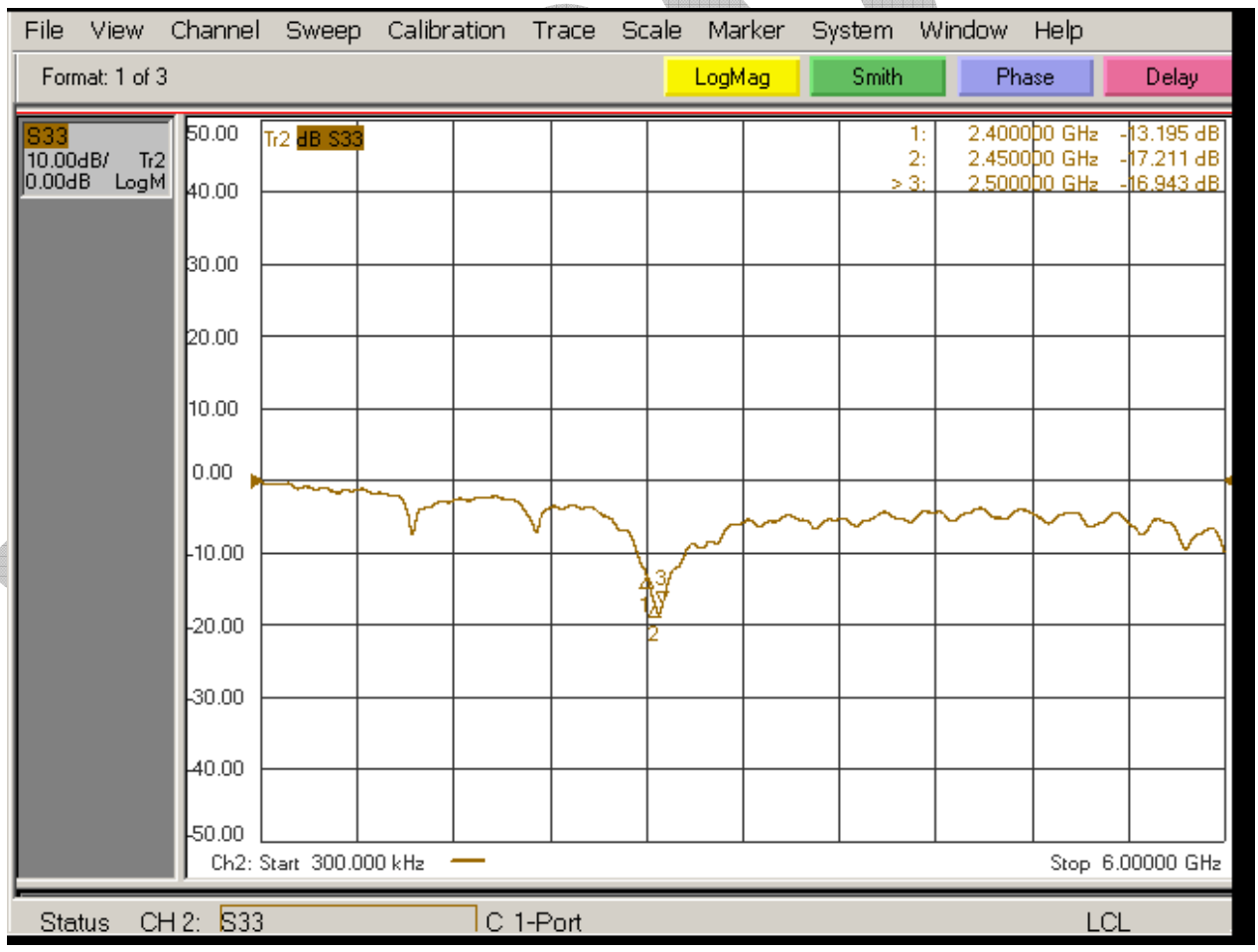


2.4G Antenna

IV. S-Parameter Measurement Result：

2.4G Antenna- Return loss

Frequency MHz	2400 MHz	2450 MHz	2500 MHz
dB	-13.19	-17.21	-16.94



V. The Test Information Anechoic Chamber

A. Scope

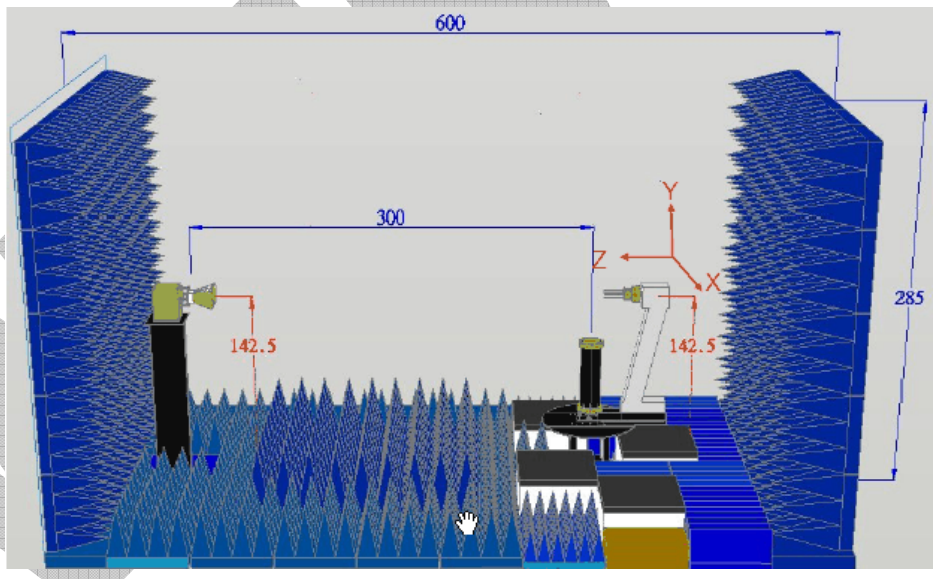
This statement of work defines the requirements of a far-field antenna measurement range, which includes

(1) One 325 cm (W) x 285 cm (H) x 640 cm (L) Antenna Measurement Anechoic Chamber, detailed requirements refer section 2.0 .

(2) One Far-field Antenna Measurement System with spinning linear CP measurement capabilities, detailed requirement refer section 3.0 .

(3) One broad-band transmitted antenna, detailed requirements refer section 8.0 .

(4) Three NRL-4433 standard gain antennas, detailed requirements refer section 9.0 .



B. Antenna Measurement Anechoic Chamber

Fully anechoic chamber with dimension 325 cm in width, 285 cm in height and 640 cm in length. The quiet zone of this Chamber shall be greater than

70 cm @ 0.9 GHz, 50 cm @1.8 GHz, 44 cm @2.4 GHz, 28 cm @5.8 GHz, 16 cm @18 GHz. Contractor should be aware of this anechoic chamber is going to be used for performing far-filed antenna measurement.

C. Electrical specifications

Frequency Range: 800 MHz to 18 GHz,
Quiet zone size: >70 cm @ 0.9 GHz, >50 cm @1.8 GHz, >44 cm @2.4 GHz, >28 cm @5.8 GHz, >16 cm @18 GHz.
Quiet zone ripple: < +/- 0.5 dB @1.5~2.4 GHz, < +/- 0.25 dB @2.4~18GHz

Field Probing Frequency	Peak-to-Peak Amplitude Ripple (within specified Quiet Zone Area)	Quiet Zone Size (cm)	Compliant
0.9 GHz	< 0.8 dB	70	Yes
1.575 GHz	< 0.6 dB	55	Yes
1.8 GHz	< 0.5 dB	50	Yes
2.45 GHz	< 0.4 dB	44	Yes
4.8 GHz	< 0.3 dB	31	Yes
5.8 GHz	< 0.3 dB	28	Yes

D. Absorbers

We shall design and install proper absorbers on the inner walls of the chamber to guarantee the electrical specifications. However, the absorbers height shall be no less than 24" which enables the space in the chamber to be around 203 cm (W) x 163 cm (H) x 533 cm (L). All the absorber used shall meet NRL-8093 fire retardant regulations

E. Far-field Antenna Measurement System

We shall supply all the hardware and software which are capable of characterizing antenna radiation patterns from 30 KHz to 6 GHz or 18GHz using the existed Agilent 5230A PNA-L or Agilent 8753ES Vector Network Analyzer. The system shall be able to automatically measure and plot single axis amplitude and phase antenna patterns in either Cartesian or polar formats.

F. Far-field measurement software

The software consists of the control or data acquisition software and the data plotting software.

(1) The data acquisition software shall at least be capable of the following functions:
*measuring single frequency per cut - single axis (azimuth); system can automatically switch frequency at the end of a scan.
*measuring data in Uni-direction or bi-direction
*measuring data at least with azimuth 360 degrees. (+/- 180 degrees or 0-360 degrees)
*real time plot in Cartesian or polar format
*screen shows real time angle position

*system automatically calculates S/N ratio level based on measured signal fluctuation
*function to set positioner zero position
*operator can set data taking velocity and data sampling interval
*entry to allow positioner offset to any angle

(2) The data plotting software shall at least be capable of the following functions:
*Editing plot data
*plotting data in Cartesian, Polar or delimited ASCII output with header information
*plotting data in linear or dB scales
*normalizing data to peak (dB), standard gain reference (dBi), or no normalization
*overlaying data, (drag and drop capability is preferable)
*outputting data to any Windows supported printers

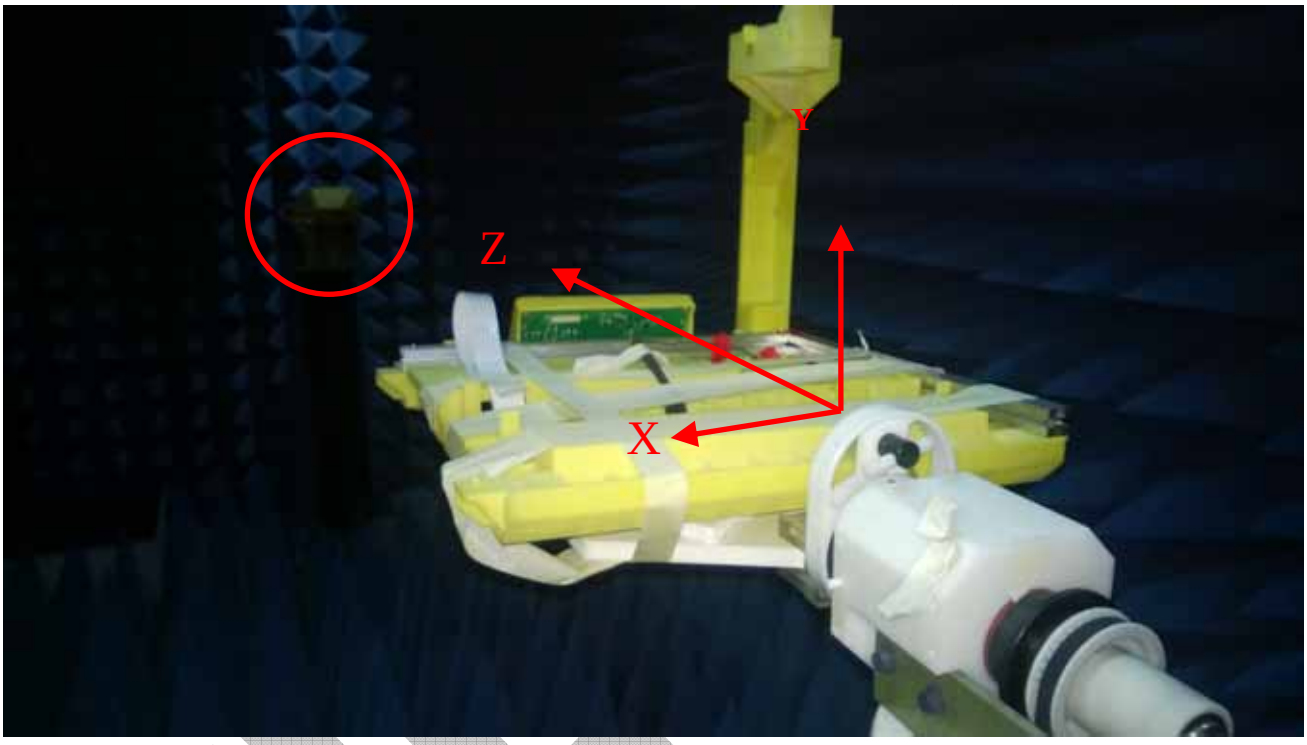
G. Broadband Transmitted antenna

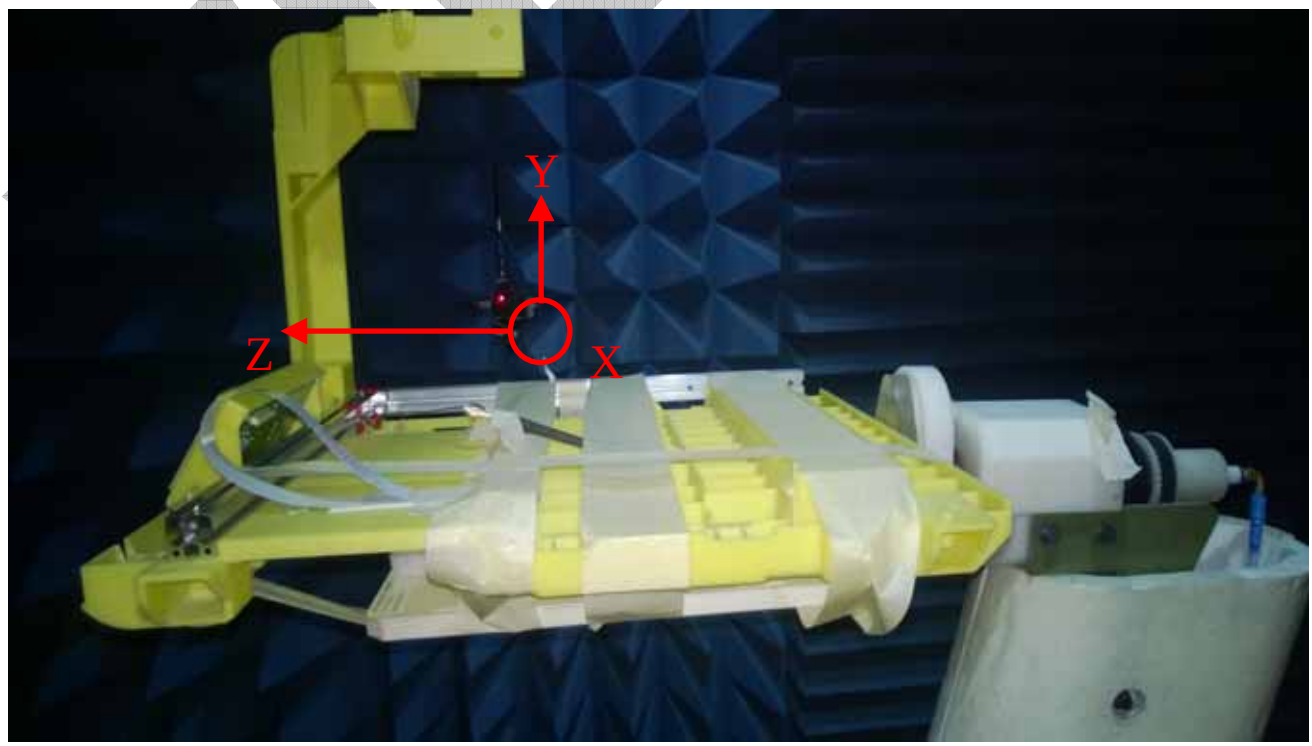
We shall provide a linear-polarized broadband antenna with the specifications better than those listed hereafter in this article,
Frequency: 1-18 GHz, Gain: >12 dBi @10 GHz, VSWR:<2,0:1, Front to Back Ration > 20 dB

H. NRL4433 Standard Gain Horns

We shall provide one WR-430, WR-187 one DRH0118 standard gain horns which meets the specifications of NRL-4433 report. The operating frequency of WR-430 standard gain horn is from 1.7 to 2.6 GHz, and WR-187 from 3.95 to 5.85 GHz, and DRH-0118 from 0.8 to 18GHz. We shall also provide NRL-4433 theoretical gain curves and tables for the standard gain horns.

VI. Antenna Measurement Photo



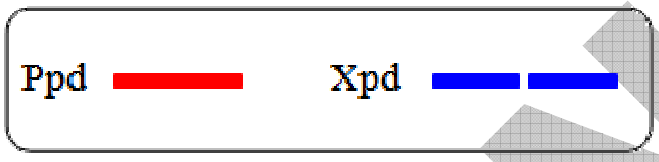


VII. Antenna Measurement Result

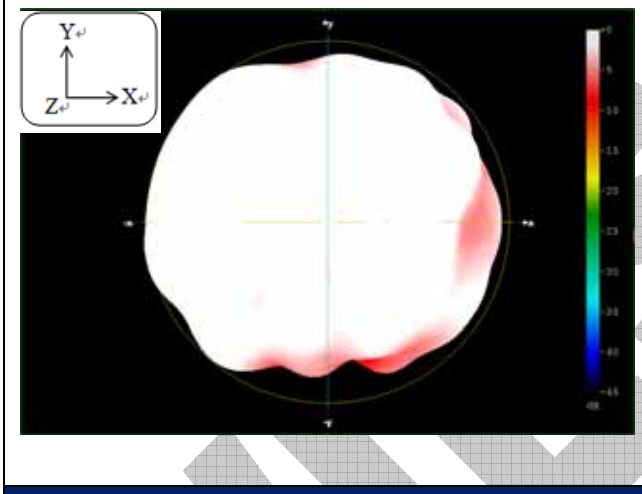
2.4G Antenna Gain Value

Frequency (GHz)	Peak Gain (dBi)	3D Gain (dbi)	3D Radiation Efficiency (%)
2.4	3.07	-2.09	62
2.45	3.14	-2.54	56
2.5	3.56	-2.52	56

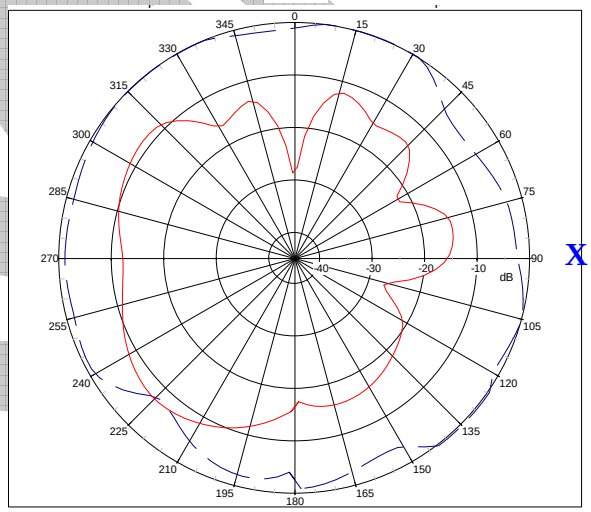
3D Radiation Pattern of 2.4G Antenna



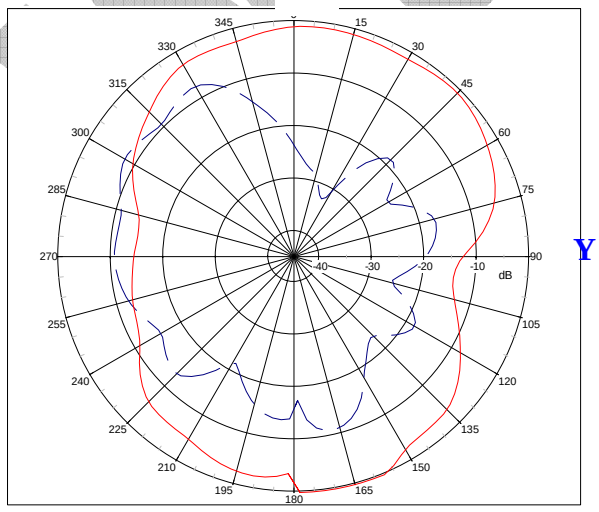
2.4GHz



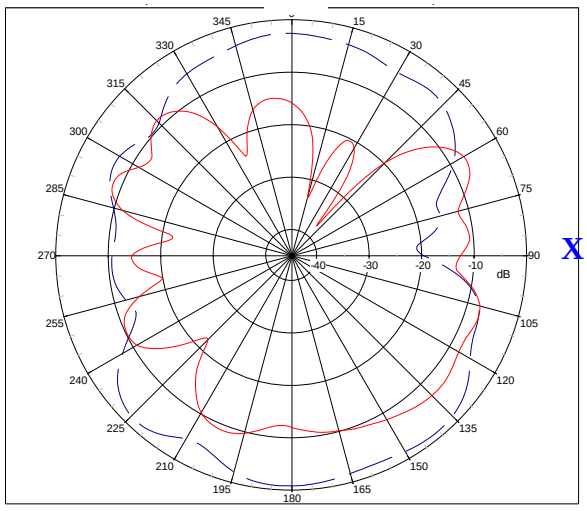
3D Pattern



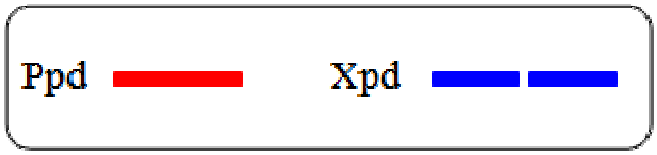
Far-field Pattern @Phi=0 deg. (E-Theta Plane-Cut)



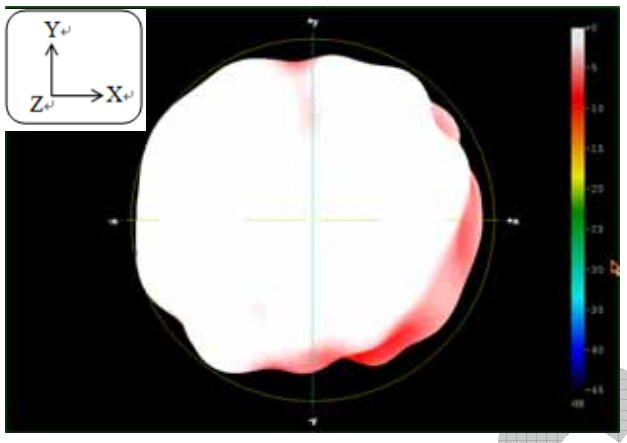
Far-field Pattern @Phi=90 deg. (E-Theta Plane-Cut)



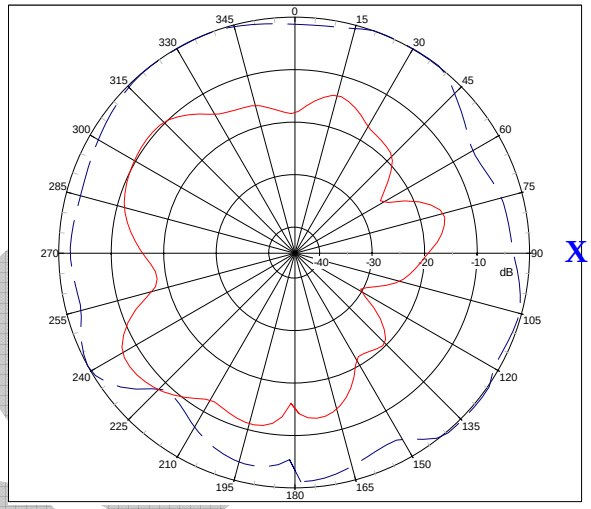
Far-field Pattern @Theta=90 deg. (E-Phi Plane-Cut)



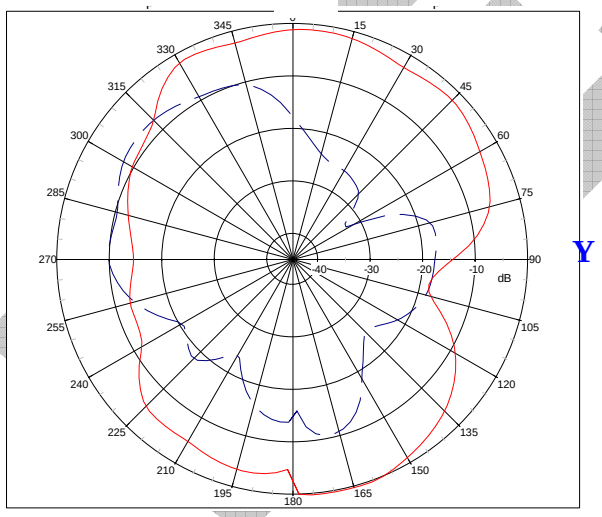
2.45GHz



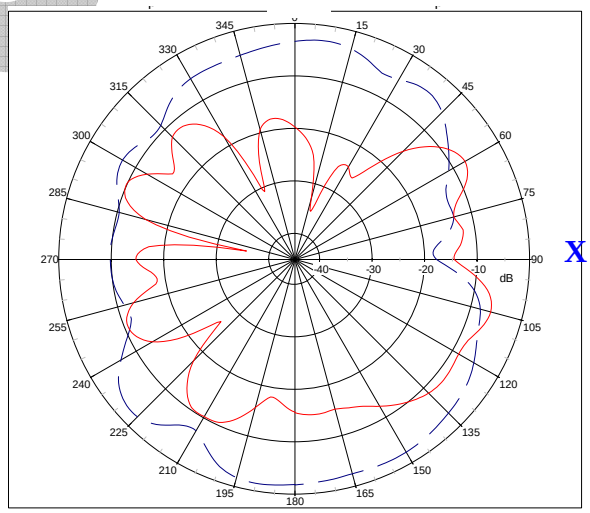
3D Pattern



Far-field Pattern @Phi=0 deg. (E-Theta Plane-Cut)



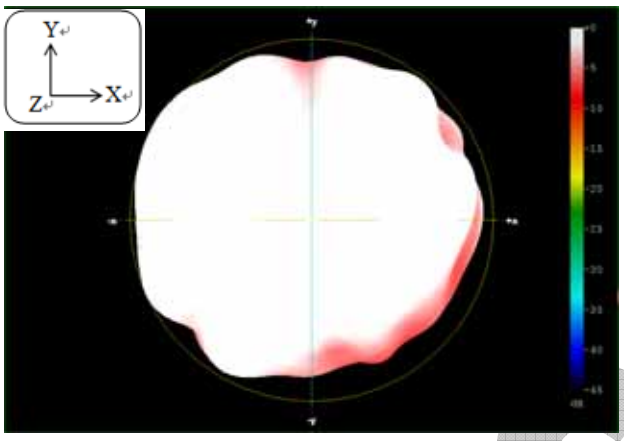
Far-field Pattern @Phi=90 deg. (E-Theta Plane-Cut)



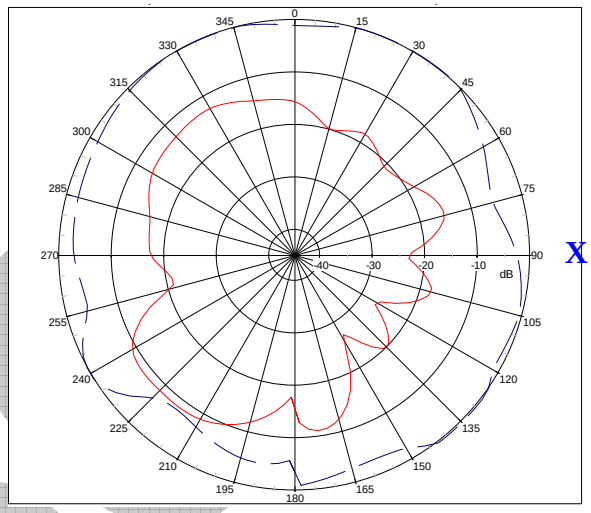
Far-field Pattern @Theta=90 deg. (E-Phi Plane-Cut)

Ppd Xpd

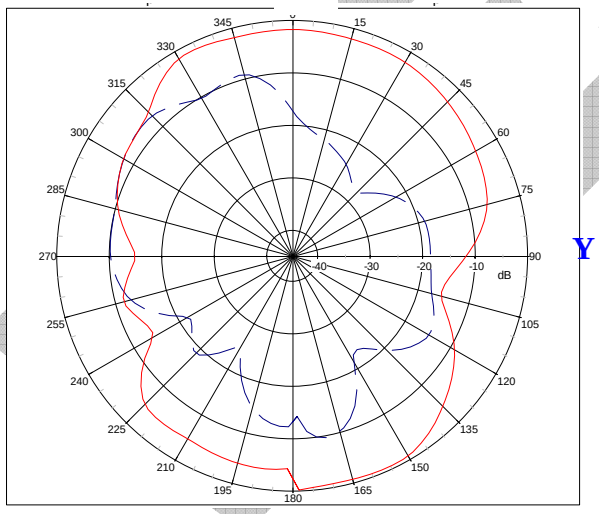
2.5GHz



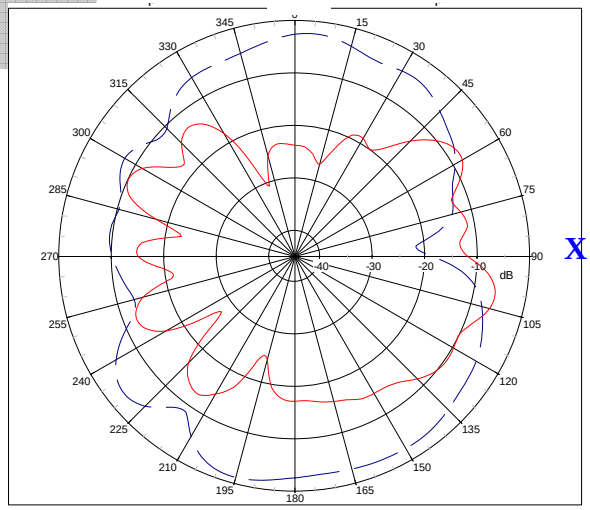
3D Pattern



Far-field Pattern @Phi=0 deg. (E-Theta Plane-Cut)



Far-field Pattern @Phi=90 deg. (E-Theta Plane-Cut)



Far-field Pattern @Theta=90 deg. (E-Phi Plane-Cut)

BUREAU VERITAS
Certification

WIESON TECHNOLOGIES (DONG GUAN) CO., LTD.

XINBAOWEI INDUSTRIAL BUILDING, HUANGANG INDUSTRIAL ZONE, HOUJIE TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO9001:2008

Scope of certification

DESIGN,MANUFACTURE AND SALES OF ELECTRONIC AND AUTOMOTIVE CONNECTORS,CABLES,WIRE HARNESS,RF AND ANTENNA PRODUCTS,CAR AUDIO AND VIDEO,PLASTIC INJECTION,STAMPING PARTS,TOOLING MOLD,LED LIGHTING.

Certification cycle start date: **25 February 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **24 February 2016**

Original certification date: **25 February 2013**

Certificate No. 300430-US

Version A, Revision date: 25 February 2013

Certification Authority

ANAB ACCREDITED

Local office: Rm.403A-406, Tower C, The Fifth Square, No. 7, Chaoyangmen North Avenue,Beijing 100010, China

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call (+86 10 59683663)