

## Test Report

No. SHAEC1018761207

Date: 12 Jan 2011

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RAYCHEM ELECTRONICS(SHANGHAI)LTD.

307 QINJIANG ROAD CAOHEJING HI-TECH DEVELOPMENT PARK

The following sample(s) was/were submitted and identified on behalf of the clients as : ZH2-18.0

SGS Job No. : SP10-042131 - SH  
Model No. : A88257-000  
Sample May Cover : ZH2/ZH4  
Material No. : 201451848  
Lot No. : 5135/01/02  
Composition : POLYOLEFIN  
Date of Sample Received : 28 Dec 2010  
Testing Period : 28 Dec 2010 - 12 Jan 2011  
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 comply with the RoHS Directive 2002/95/EC and its subsequent amendments.  
When tested as specified, Dimethyl fumarate(DMF) content of the submitted sample comply with the requirement of EU Directive 2009/251/EC

Signed for and on behalf of  
SGS-CSTC Ltd.



Fan Jingjie, JJ  
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	SHA10-187612.002	Black plastic tube

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

RoHS Directive 2002/95/EC

Test Method : With reference to IEC 62321:2008

- (1) Determination of Cadmium by ICP-OES.
- (2) Determination of Lead by ICP-OES.
- (3) Determination of Mercury by ICP-OES.
- (4) Determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
- (5) Determination of PBBs / PBDEs content by GC-MS.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
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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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
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 document 2005/618/EC amending RoHS directive 2002/95/EC

### Element(s)

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Arsenic (As)	mg/kg	10	ND
Selenium (Se)	mg/kg	10	ND
Barium (Ba)	mg/kg	10	ND
Chromium (Cr)	mg/kg	2	ND

### Notes :

- (1) 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,
  - 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

### Asbestos

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Test Method : With reference to NIOSH 9000, analysis was performed by XRD.

<u>Test Item(s)</u>	<u>CAS_NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Actinolite	077536-66-4	%	1	Negative
Amosite	012172-73-5	%	1	Negative
Anthophyllite	077536-67-5	%	1	Negative
Chrysotile	012001-29-5	%	1	Negative
Crocidolite	012001-28-4	%	1	Negative
Tremolite	077536-68-6	%	1	Negative

### Notes :

- (1) Negative means <1.0%, Positive means >1.0%
- (2) These tests were subcontracted to GZ (Date of testing: 2010/12/30-2011/01/05).

### Halogen

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	145
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

### Organic-tin compounds

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Tributyl tin (TBT)	mg/kg	0.02	ND
Triphenyl tin (TPT)	mg/kg	0.02	ND

### Notes :

- (1) Organostannic compounds Reference Information: Entry 20 of Regulation (EC) No 552/2009 and 276/2010 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/62/EC and 2009/425/EC)
  - (a) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is acting as biocide in free association paint.
  - (b) Shall not be placed on the market, or used, as substances or in mixtures where the substance

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- or mixture acts as biocide to prevent the fouling by micro-organisms, plants or animals of:
- (b-1) all craft irrespective of their length intended for use in marine, coastal, estuarine and inland waterways and lakes;
  - (b-2) cages, floats, nets and any other appliances or equipment used for fish or shellfish farming;
  - (b-3) any totally or partly submerged appliance or equipment.
  - (c) 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.
  - (d) TBT and TPT compounds shall not be used after 1 July 2010 in articles where the concentration in the article, or part thereof, is greater than the equivalent of 0.1% by weight of tin; otherwise, articles shall not be placed on the market.
  - (e) DBT compounds shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0.1% by weight of tin; otherwise, articles and mixtures shall not be placed on the market.
  - (f) DOT compounds shall not be used after 1 January 2012 in some textile, childcare article etc. for supply to, or use by, the general public, where the concentration in the article, or part thereof, is greater than the equivalent of 0.1% by weight of tin; otherwise, articles shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 and 276/2010 to get more detail information.

**ODS**

Test Method : With reference to US EPA 5021A-2003, analysis was performed by HS-GC-MS.

<u>Test Item(s)</u>	<u>CAS NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
CFC		-	-	-
CFC-11	75-69-4	µg/g	0.1	ND
CFC-12	75-71-8	µg/g	0.1	ND
CFC-113	76-13-1	µg/g	0.1	ND
CFC-114	76-14-2	µg/g	0.1	ND
CFC-13	75-72-9	µg/g	0.1	ND
CFC-111	354-56-3	µg/g	0.1	ND
CFC-112	76-11-9	µg/g	0.1	ND
CFC-112	76-12-0	µg/g	0.1	ND
CFC-113	354-58-5	µg/g	0.1	ND
CFC-114	374-07-2	µg/g	0.1	ND
CFC-115	76-15-3	µg/g	0.1	ND
CFC-211	422-78-6	µg/g	0.1	ND
CFC-212	661-96-1	µg/g	0.1	ND
CFC-213	1652-89-7	µg/g	0.1	ND
CFC-214	677-68-9	µg/g	0.1	ND
CFC-215	1599-41-3	µg/g	0.1	ND

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<u>Test Item(s)</u>	<u>CAS NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
CFC-215	76-17-5	µg/g	0.1	ND
CFC-216	661-97-2	µg/g	0.1	ND
CFC-216	1652-80-8	µg/g	0.1	ND
CFC-217	422-86-6	µg/g	0.1	ND
HCFC		-	-	-
HCFC-21	75-43-4	µg/g	0.1	ND
HCFC-22	75-45-6	µg/g	0.1	ND
HCFC-123	306-83-2	µg/g	0.1	ND
HCFC-124	2837-89-0	µg/g	0.1	ND
HCFC-141b	1717-00-6	µg/g	0.1	ND
HCFC-142b	75-68-3	µg/g	0.1	ND
HCFC-31	593-70-4	µg/g	0.1	ND
HCFC-121	354-14-3	µg/g	0.1	ND
HCFC-122	354-21-2	µg/g	0.1	ND
HCFC-123a	354-23-4	µg/g	0.1	ND
HCFC-124a	354-25-6	µg/g	0.1	ND
HCFC-131	359-28-4	µg/g	0.1	ND
HCFC-131a	811-95-0	µg/g	0.1	ND
HCFC-132a	471-43-2	µg/g	0.1	ND
HCFC-132b	1649-08-7	µg/g	0.1	ND
HCFC-133a	75-88-7	µg/g	0.1	ND
HCFC-221	422-26-4	µg/g	0.1	ND
HCFC-222	422-30-0	µg/g	0.1	ND
HCFC-223	422-52-6	µg/g	0.1	ND
HCFC-225ca	422-56-0	µg/g	0.1	ND
HCFC-225cb	507-55-1	µg/g	0.1	ND
HCFC-226	431-87-8	µg/g	0.1	ND
HCFC-231	421-94-3	µg/g	0.1	ND
HCFC-232	460-89-9	µg/g	0.1	ND
HCFC-233	7125-84-0	µg/g	0.1	ND
HCFC-234	425-94-5	µg/g	0.1	ND
HCFC-235	460-92-4	µg/g	0.1	ND
HCFC-241	666-27-3	µg/g	0.1	ND
HCFC-242	460-63-9	µg/g	0.1	ND
HCFC-243	338-75-0	µg/g	0.1	ND
HCFC-244	679-85-6	µg/g	0.1	ND
HCFC-251	421-41-0	µg/g	0.1	ND
HCFC-252	819-00-1	µg/g	0.1	ND
HCFC-253	460-35-5	µg/g	0.1	ND
HCFC-261	7799-56-6	µg/g	0.1	ND

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<u>Test Item(s)</u>	<u>CAS NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
HCFC-261	420-97-3	µg/g	0.1	ND
HCFC-271	430-55-7	µg/g	0.1	ND
HCFC-262	102738-79-4	µg/g	0.1	ND
HCFC-262	420-99-5	µg/g	0.1	ND
CHC		-	-	-
1,3-dichloropropane	142-28-9	µg/g	0.1	ND
2,2-dichloropropane	594-20-7	µg/g	0.1	ND
Carbon tetrachloride	56-23-5	µg/g	0.1	ND
chloroethane	75-00-3	µg/g	0.1	ND
Chloroform	67-66-3	µg/g	0.1	ND
chloromethane	74-87-3	µg/g	0.1	ND
Cis-1,2-dichloroethene	156-59-2	µg/g	0.1	ND
Cis-1,3-dichloropropene	10061-01-5	µg/g	0.1	ND
Hexachlorobutadiene	87-68-3	µg/g	0.1	ND
Methylene chloride	75-09-2	µg/g	0.1	ND
Tetrachloroethene	127-18-4	µg/g	0.1	ND
Trans-1,2-dichloroethene	156-60-5	µg/g	0.1	ND
Trans-1,3-dichloropropene	10061-02-6	µg/g	0.1	ND
Trichloroethylene	79-01-6	µg/g	0.1	ND
1,1,1,2-tetrachloroethane	630-20-6	µg/g	0.1	ND
1,1,1-trichloroethane	71-55-6	µg/g	0.1	ND
1,1,2,2-tetrachloroethane	79-34-5	µg/g	0.1	ND
1,1,2-trichloroethane	79-00-5	µg/g	0.1	ND
1,1-dichloroethane	75-35-4	µg/g	0.1	ND
1,1-dichloroethene	75-35-4	µg/g	0.1	ND
1,1-dichloropropene	563-58-6	µg/g	0.1	ND
1,2,3-trichloropropane	96-18-4	µg/g	0.1	ND
1,2-dichloroethane	107-06-2	µg/g	0.1	ND
1,2-dichloropropane	78-87-5	µg/g	0.1	ND

## Polychlorinated Naphthalenes (PCNs)

Test Method : With reference to US EPA 8081B: 2007, analysis was performed by GC-MS

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
2-Chlorinated Naphthalene	mg/kg	5	ND
1,4-Dichlorinated Naphthalene	mg/kg	5	ND
1,5-Dichlorinated Naphthalene	mg/kg	5	ND
1,2-Dichlorinated Naphthalene	mg/kg	5	ND

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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
1,8-Dichlorinated Naphthalene	mg/kg	5	ND
1,2,3-Trichlorinated Naphthalene	mg/kg	5	ND
1,2,3,4-Tetrachlorinated Naphthalene	mg/kg	5	ND
1,2,3,4,6-Pentachlorinated Naphthalene	mg/kg	5	ND
Octa-chlorinated Naphthalene	mg/kg	5	ND

### Phthalates

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dibutyl Phthalate (DBP)	%	0.003	ND
Benzylbutyl Phthalate (BBP)	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	%	0.003	ND
Diisononyl Phthalate (DINP)	%	0.010	ND
Di-n-octyl Phthalate (DNOP)	%	0.003	ND
Diisodecyl Phthalate (DIDP)	%	0.010	ND

#### Notes :

- (1) 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.
- Please refer to Regulation (EC) No 552/2009 to get more detail information
- 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

### Polynuclear Aromatic Hydrocarbons (PAH)

Test Method : With reference to ZEK 01.2-08 of German ZLS and its amendments, analysis was performed by GC-MS.

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Test Item(s)	Unit	MDL	002
Sum of 16 PAH	mg/kg	-	3.8
Naphthalene(NAP)	mg/kg	0.2	ND
Acenaphthylene(ANY)	mg/kg	0.2	ND
Acenaphthene(ANA)	mg/kg	0.2	ND
Fluorene(FLU)	mg/kg	0.2	ND
Phenanthrene(PHE)	mg/kg	0.2	0.3
Anthracene(ANT)	mg/kg	0.2	ND
Fluoranthene(FLT)	mg/kg	0.2	0.5
Pyrene(PYR)	mg/kg	0.2	2.5
Benzo(a)anthracene(BaA)	mg/kg	0.2	ND
Chrysene(CHR)	mg/kg	0.2	ND
Benzo(b)fluoranthene(BbF)	mg/kg	0.2	ND
Benzo(k)fluoranthene(BkF)	mg/kg	0.2	ND
Benzo(a)pyrene(BaP)	mg/kg	0.2	ND
Indeno(1,2,3-c,d)pyrene(IPY)	mg/kg	0.2	ND
Dibenzo(a,h)anthracene(DBA)	mg/kg	0.2	ND
Benzo(g,h,i)perylene(BPE)	mg/kg	0.2	0.5

**ZEK 01.2-08: 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 which are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact)	Materials which 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)	<MDL (<0.2)***	1	20
Sum of 16 PAH(US EPA) (mg/kg)**	<MDL (<0.2)***	10	200

Remark : \*\* = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAH  
 \*\*\* = 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.

**PVC (Polyvinyl chloride)**

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Test Method : In-house method (SHTC-CHEM-SOP-115-T), FTIR/HATR.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
PVC	-	-	Negative

Notes :

(1) Negative=Undetectable,Positive=Detectable

### Formaldehyde

Test Method : With reference to DIN53315, analysis was performed by HPLC-DAD.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Formaldehyde	mg/kg	20	ND

### Dimethyl Fumarate (DMF)

Test Method : Solvent extraction, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dimethyl fumarate(DMF)	0.1	mg/kg	0.1	ND

Notes :

(1) The maximum permissible limit is quoted from the document EU Directive 2009/251/EC.

### Tetrabromobisphenol A (TBBP-A)

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Tetrabromobisphenol A (TBBP-A)	mg/kg	10	ND

### Short Chained Chlorinated Paraffin (SCCP) and Medium Chained Chlorinated Paraffin (MCCP)

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Short Chained Chlorinated Paraffin (SCCP)	mg/kg	50	ND
Medium Chained Chlorinated Paraffin (MCCP)	mg/kg	50	ND

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Notes :

- (1) Short Chain Chlorinated Paraffin Reference Information: Entry 42 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/45/EC):  
 Shall not be placed on the market, or used as substances, or as constituents of other substances or in mixtures in concentrations greater than 1% by weight, where the substance or mixture is intended for:  
 - metalworking  
 - fat liquoring of leather  
 Please refer to Regulation (EC) No 552/2009 to get more detail information

**Nonylphenol (NP)**

Test Method : In-house method (SHTC-CHEM-SOP-92-T), analysis was performed by LC-MS

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Nonylphenol(NP)	mg/kg	10	ND

Notes :

- (1) NP Reference Information: Entry 46 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2003/53/EC):  
 Shall not be placed on the market, or used, as substances or in mixtures in concentrations equal to or greater than 0,1 % by weight for industrial and institutional cleaning, domestic cleaning, textiles and leather processing, emulsifier in agricultural teat dips, metal working, manufacturing of pulp and paper, cosmetic products, other personal care products and co-formulants in pesticides and biocides.  
 Please refer to Regulation (EC) No 552/2009 to get more detail information

**Hexabromocyclododecane (HBCDD)**

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

**Azo Dyes**

Test Method : Textile: According to EN 14362-1:2003 - Analysis was conducted with GC-MS/HPLC-DAD.

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<u>Test Item(s)</u>	<u>CAS NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
4-Aminobiphenyl	92-67-1	mg/kg	5	ND
Benzidine	92-87-5	mg/kg	5	ND
4-chloro-o-toluidine	95-69-2	mg/kg	5	ND
2-naphtylamine	91-59-8	mg/kg	5	ND
o-aminoazotoluene	97-56-3	mg/kg	5	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	mg/kg	5	ND
4-chloroaniline	106-47-8	mg/kg	5	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	mg/kg	5	ND
4,4'-diaminodiphenylmethane	101-77-9	mg/kg	5	ND
3,3'-dichlorobenzidine	91-94-1	mg/kg	5	ND
3,3'-dimethoxybenzidine	119-90-4	mg/kg	5	ND
3,3'-dimethylbenzidine	119-93-7	mg/kg	5	ND
3,3'-Dimethyl-4,4'-diaminodiphe nylmethane / 4,4'-methylenedi-o-toluidine	838-88-0	mg/kg	5	ND
p-cresidine	120-71-8	mg/kg	5	ND
4,4'-methylene-bis- (2-chloroaniline)	101-14-4	mg/kg	5	ND
4,4'-oxydianiline	101-80-4	mg/kg	5	ND
4,4'-thiodianiline	139-65-1	mg/kg	5	ND
o-toluidine	95-53-4	mg/kg	5	ND
4-methyl-m-phenylenediamine / 2,4-Toluylendiamine	95-80-7	mg/kg	5	ND
2,4,5-trimethylaniline	137-17-7	mg/kg	5	ND
4-aminoazobenzene	60-09-3	mg/kg	5	ND
O-Anisidine	90-04-0	mg/kg	5	ND
2,4-Xylidine	95-68-1	mg/kg	5	ND
2,6-Xylidine	87-62-7	mg/kg	5	ND

## Conclusion

\*\*

## Notes :

- (1) Test result for 4-aminoazobenzene (CAS no.: 60-09-3) is considered as "not detected" (i.e. <5mg/kg) since both aniline and/or 1,4-phenylenediamine is not found (i.e. <5mg/kg) by mentioned test method

## Polychlorinated Biphenyls (PCBs)

Test Method : With reference to US EPA 8082A: 2007, analysis was performed by GC-MS

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<u>Test Item(s)</u>	<u>CAS NO</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
2.4.4'-Trichlorobiphenyl (PCB 28)	7012-37-5	mg/kg	0.5	ND
2.2'.5.5'-Tetrachloro-biphenyl (PCB 52)	35693-99-3	mg/kg	0.5	ND
2.2'.4.5.5'-Pentachloro-biphenyl (PCB 101)	37680-73-2	mg/kg	0.5	ND
2.3'.4.4'.5'-Pentachlorobiphenyl (PCB 118)	31508-00-6	mg/kg	0.5	ND
2.2'.3.4.4'.5'-Hexachloro-biphenyl (PCB 138)	35065-28-2	mg/kg	0.5	ND
2.2'.4.4'.5.5'-Hexachloro-biphenyl (PCB 153)	35065-27-1	mg/kg	0.5	ND
2.2'.3.4.4'.5.5'-Heptachlorobiphenyl (PCB 180)	35065-29-3	mg/kg	0.5	ND

### PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid)

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Perfluorooctane Sulfonates (PFOS) and related Acid, Metal Salt and Amide	mg/kg	10	ND
Perfluorooctyl Acid (PFOA)	mg/kg	10	ND

#### Notes :

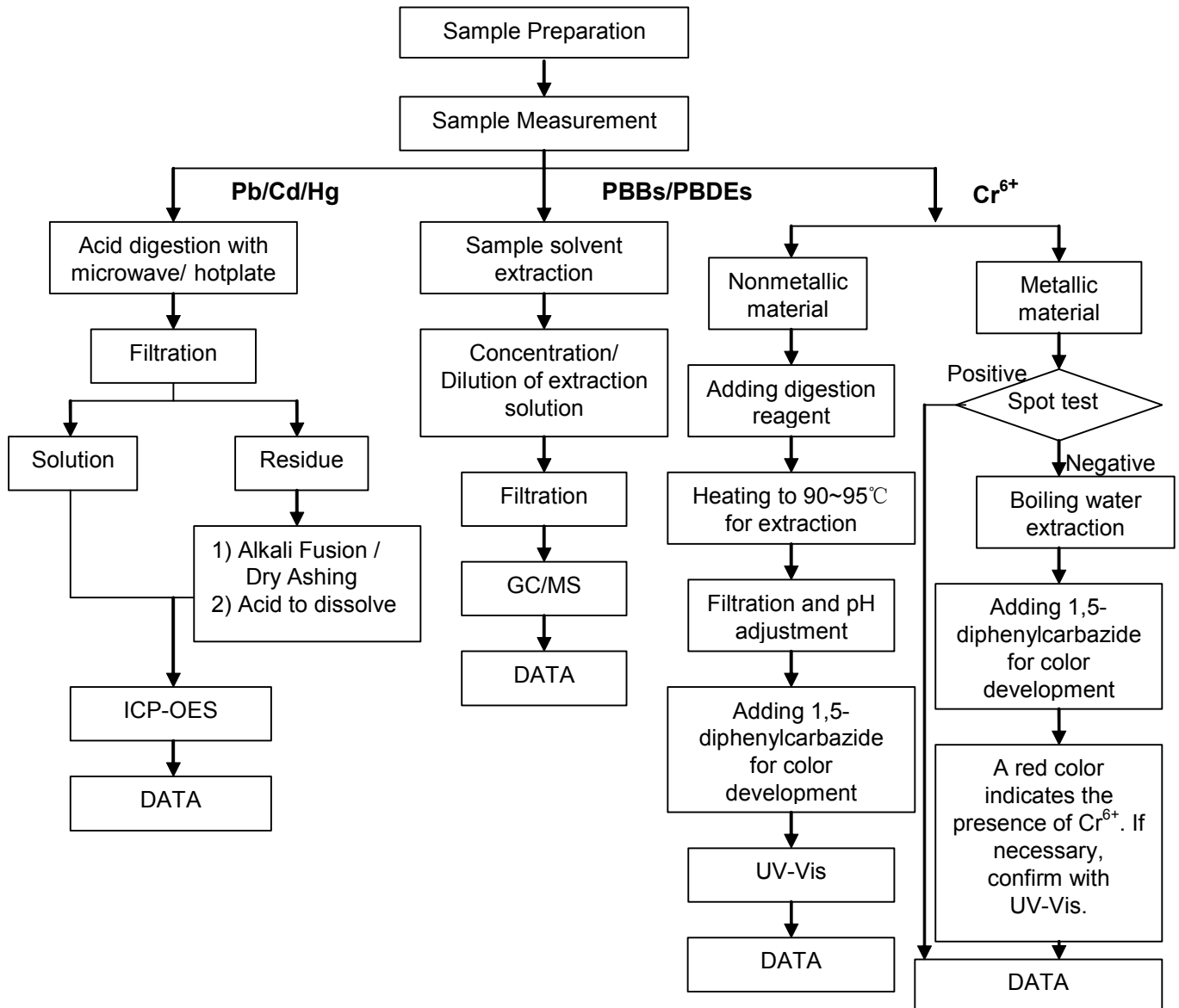
- (1) PFOS Reference Information: Entry 53 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2006/122/EC)
  - (i) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
  - (ii) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg /m<sup>2</sup> of the coated material. Please refer to Regulation (EC) No 552/2009 to get more detail information

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**ATTACHMENTS**

**RoHS Testing Flow Chart**

- 1) Name of the person who made testing: Allen Xiao/ Wesley Wei / Andy Zhao /Elim Lin
- 2) Name of the person in charge of testing: Jeff Zhang/George Xu/Tracy Yue
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded)

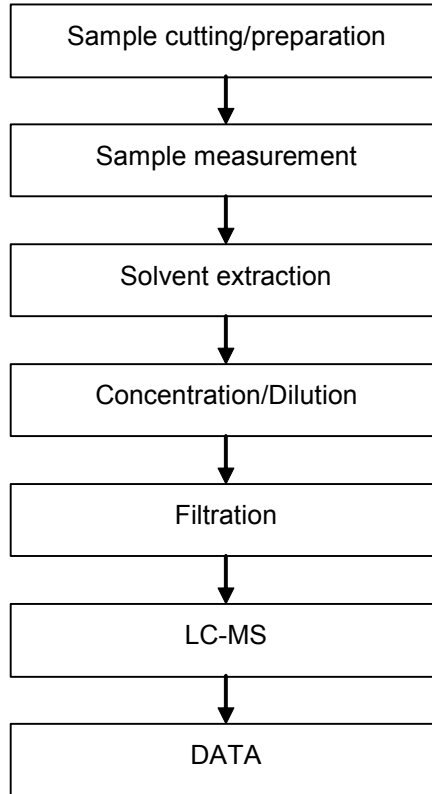


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## PFOS/PFOA Testing Flow Chart

- 1) Name of the person who made testing: Judy Li
- 2) Name of the person in charge of testing: Nancy Du

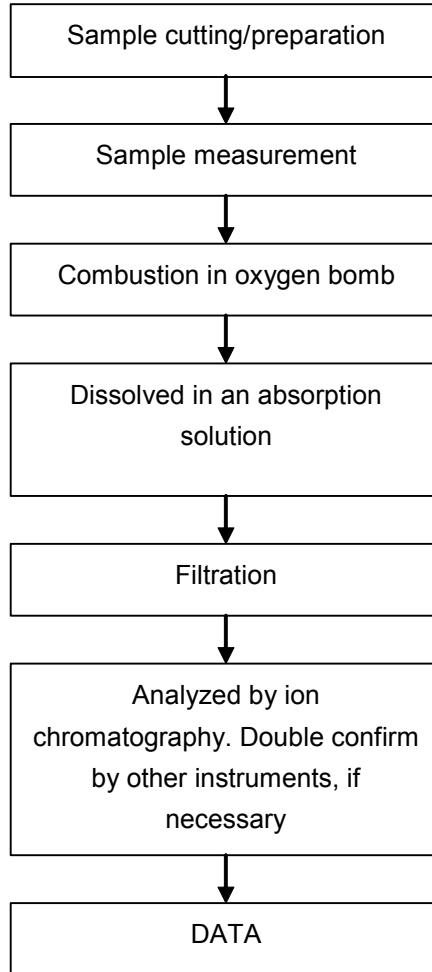


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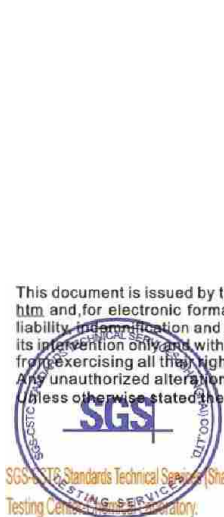


### Halogen Testing Flow Chart

- 1) Name of the person who made testing: Daisy Gong
- 2) Name of the person in charge of testing: Alex Jiang

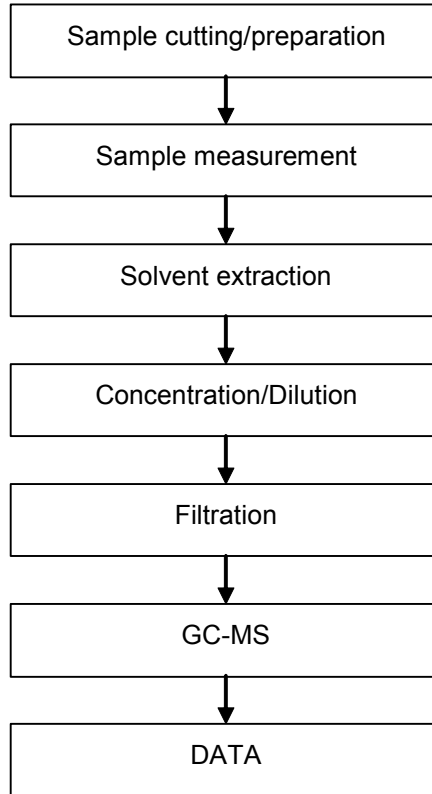


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## Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Vickey Gui
- 2) Name of the person in charge of testing: Susan Liu

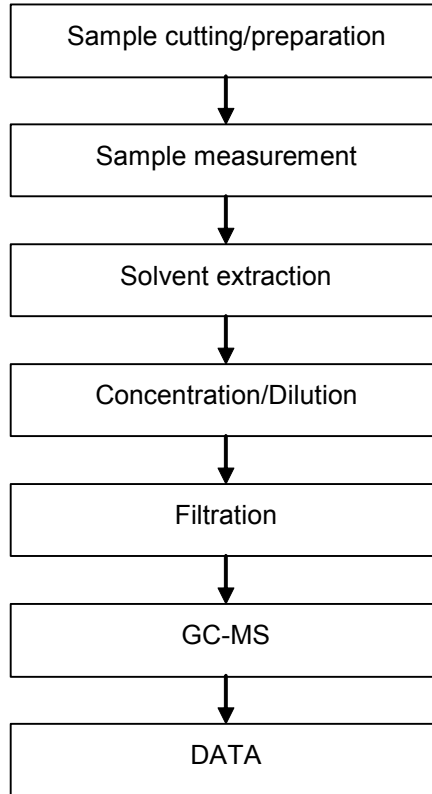


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## PAHs Testing Flow Chart

- 1) Name of the person who made testing: Jessy Huang
- 2) Name of the person in charge of testing: Tracy Yue

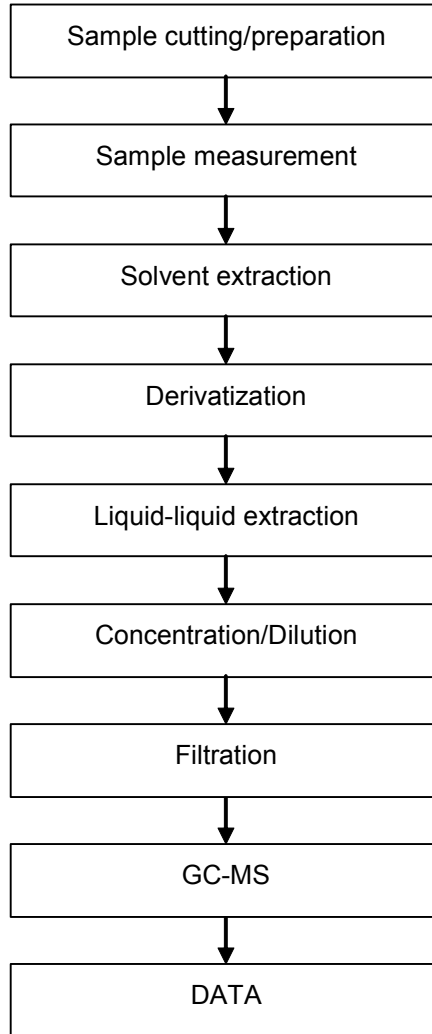


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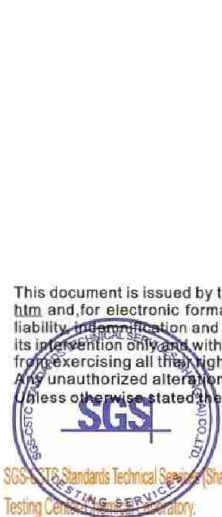


**TBBP-A Testing Flow Chart**

- 1) Name of the person who made testing: Gary Xu
- 2) Name of the person in charge of testing: Tracy Yue

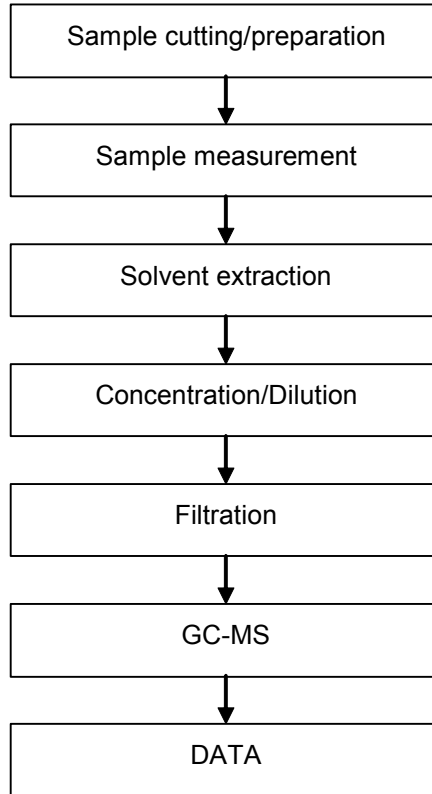


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**HBCDD Testing Flow Chart**

- 1) Name of the person who made testing: Bill Zhong
- 2) Name of the person in charge of testing: Susan Liu

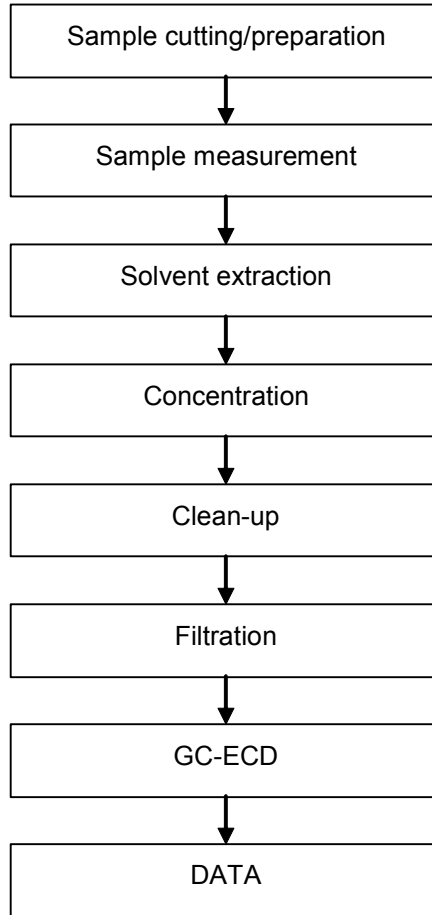


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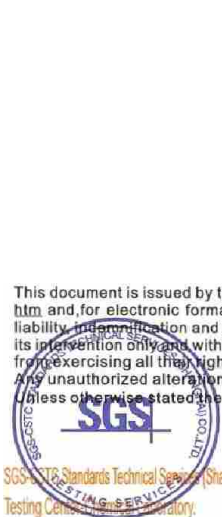


**SCCP Testing Flow Chart**

- 1) Name of the person who made testing: Bill Zhong
- 2) Name of the person in charge of testing: Susan Liu

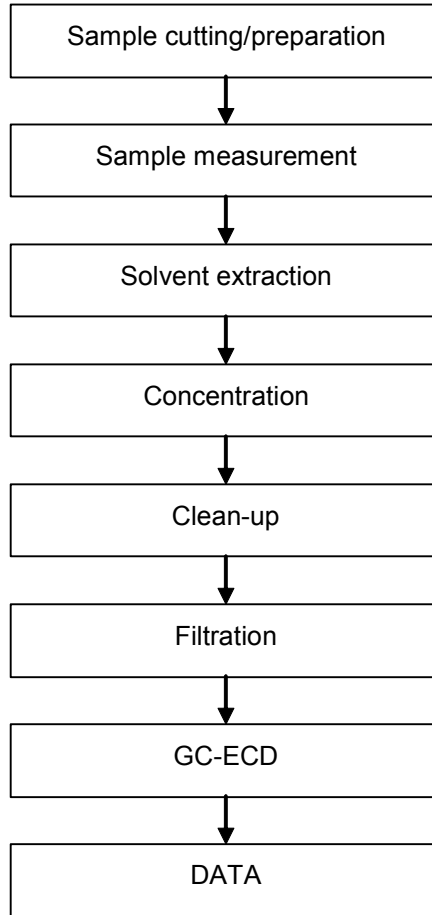


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## MCCP Testing Flow Chart

- 1) Name of the person who made testing: Bill Zhong
- 2) Name of the person in charge of testing: Susan Liu

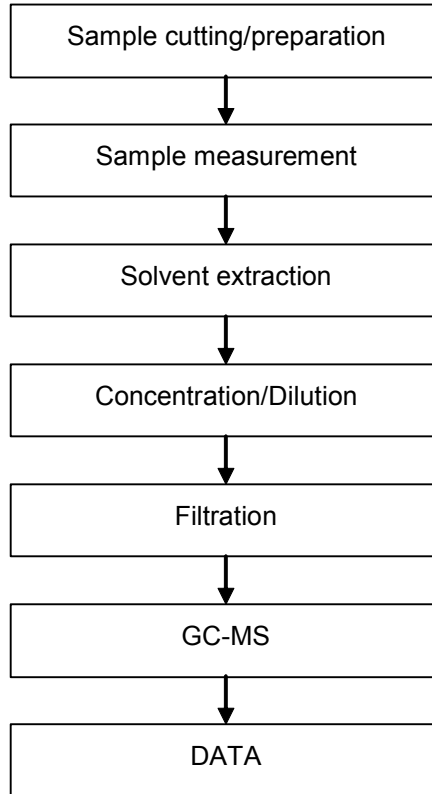


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## DMF (Dimethyl fumarate) Testing Flow Chart

- 1) Name of the person who made testing: Tina Hu
- 2) Name of the person in charge of testing: Tracy Yue

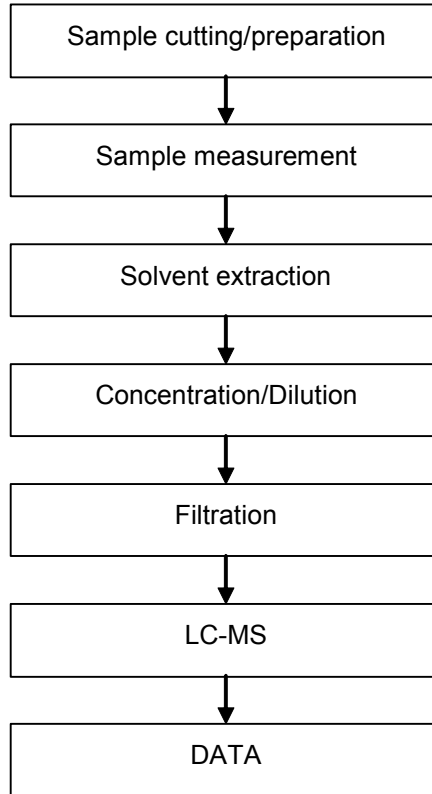


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**NP Testing Flow Chart**

- 1) Name of the person who made testing: Judy Li
- 2) Name of the person in charge of testing: Nancy Du

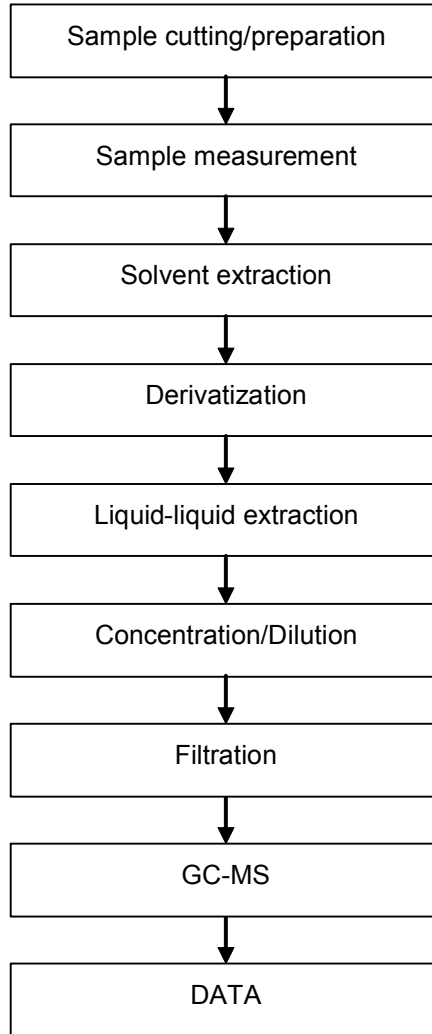


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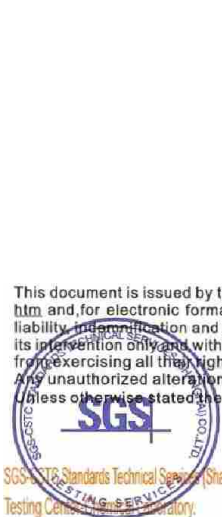


**Organotin Testing Flow Chart**

- 1) Name of the person who made testing: Jessi Zhu
- 2) Name of the person in charge of testing: Tracy Yue

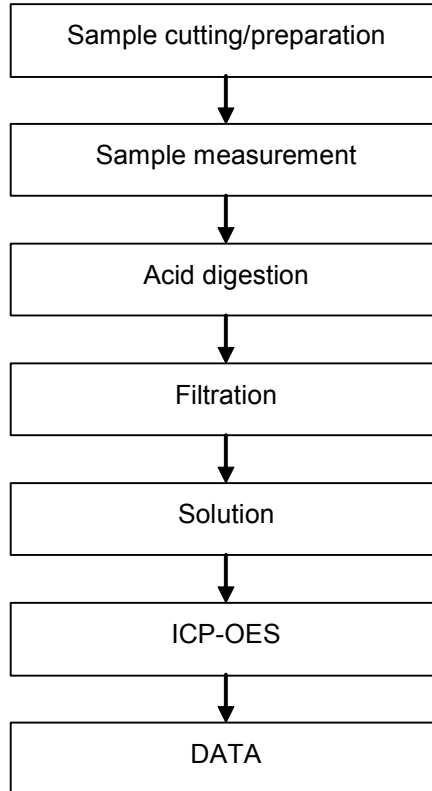


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**Elementary Testing Flow Chart**

- 1) Name of the person who made testing: Wesley Wei / Allen Xiao
- 2) Name of the person in charge of testing: Jeff Zhang

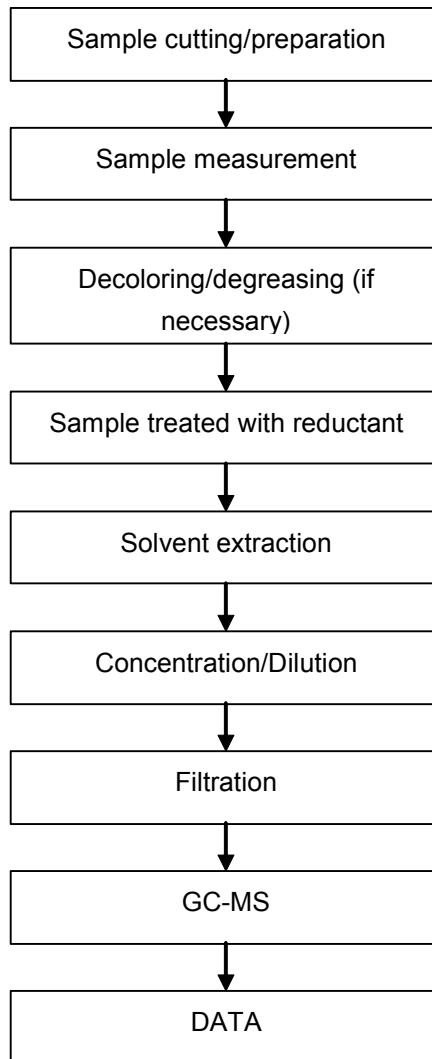


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### AZO Testing Flow Chart

- 1) Name of the person who made testing: Cissy Wang
- 2) Name of the person in charge of testing: Joan Ye

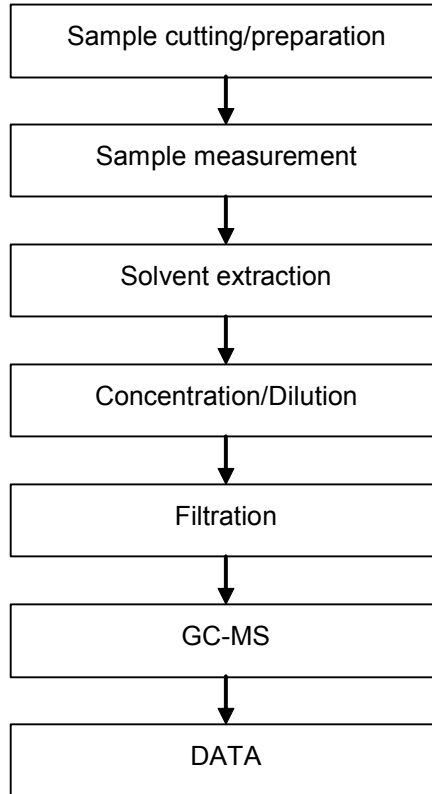


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## PCB/ PCN Testing Flow Chart

- 1) Name of the person who made testing: Bill Zhong
- 2) Name of the person in charge of testing: Susan Liu

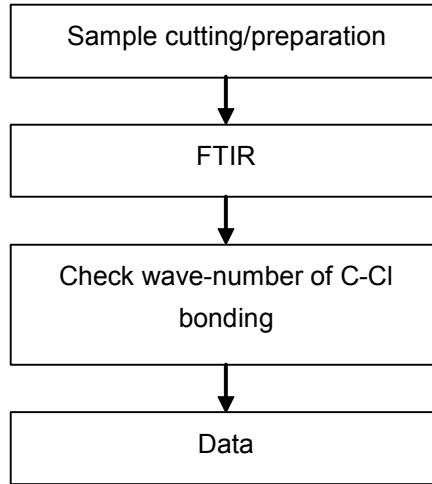


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## PVC Testing Flow Chart

- 1) Name of the person who made testing: Carol Lin
- 2) Name of the person in charge of testing: Alex Jiang



Sample photo:



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\*\*\* End of Report \*\*\*

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