

LUCKY LIGHT ELECTRONICS CO., LTD

E&F, 15/F, COOPERATIVE FINANCE BUILDING SHENNAN RD., LUOHU DIST., SHENZHEN, CHINA

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

SGS Job No.	: SZ12573058
SGS Internal Reference No.	: 2.1
Date of Sample Received	: JUN 22, 2010
Testing Period	: JUN 22, 2010 TO JUN 25, 2010
Test Requested	: Selected test (s) as requested by client.
Test Method	: Please refer to next page(s).
Test Result(s)	: Please refer to next page(s).

Signed for and on behalf of SGS-CSTC Ltd.

Manio

Manson Yang Approved Signatory

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Date: JUN 25, 2010

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Test Results:

Description for specimen 1 : Red body(mixed) + Yellow body (mixed) + Blue body (mixed) + Lt-green body (mixed) + Transparent body (mixed)

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321: 2008, UV-Vis	N.D.	2	1000
Sum of PBBs	mg/kg	-	N.D.	-	1000
Monobromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Dibromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tribromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tetrabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Pentabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5	
Hexabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Heptabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Octabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5	
Nonabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.		
Decabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Sum of PBDEs	mg/kg	-	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Dibromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tribromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Tetrabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Pentabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Hexabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Heptabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Octabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Nonabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	
Decabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5	

Note:

1. mg/kg = ppm

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

3. MDL = Method Detection Limit

4. "-" = Not regulated

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Test Report

No.: GZ1006069161/CHEM

Date: JUN 25, 2010

PAHs (Polynuclear Aromatic Hydrocarbons)

1. mg/kg = ppm

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

3. MDL = Method Detection Limit

ZEK 01.2-08 : Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3	
	toys with normal skin contact	included in Category 1, with predictable contact with the skin longer than 30 s. (long-	with predictable skin contact	
Benzo[a]pyrene (mg/kg)	<mdl (<0.2)***<="" td=""><td>1</td><td>20</td></mdl>	1	20	
Sum of 16 PAH (US EPA)(mg/kg)**	<mdl (<0.2)***<="" td=""><td>10</td><td>200</td></mdl>	10	200	

Remark:

** = 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 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.

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Date: JUN 25, 2010

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PFOA & PFOS (Perfluorooctanoic acid & Perfluorooctane sulfonates)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Perfluorooctanoic acid (PFOA)	mg/kg	EPA 3550C: 2007, LC-MS	N.D.	10
Perfluorooctane sulfonates (PFOS) PFOS – Acid PFOS – Metal Salt	mg/kg	EPA 3550C: 2007, LC-MS	N.D.	10
PFOS – Amide				

Note:

1. mg/kg = ppm

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

3. MDL = Method Detection Limit

For reference: 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):

(1) 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.

(2) 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 1 μ g /m² of the coated material.

Halogen

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Fluorine (F)	mg/kg	BS EN 14582:2007, IC	N.D.	50
Chlorine (Cl)	mg/kg	BS EN 14582:2007, IC	578	50
Bromine (Br)	mg/kg	BS EN 14582:2007, IC	N.D.	50
lodine (I)	mg/kg	BS EN 14582:2007, IC	N.D.	50
Note:				
1. mg/kg = ppm				
2. N.D. = Not Detected (< MDL)			
3. MDL = Method Detect	ion Limit			

TBBPA (Tetrabromobisphenol A)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	
Tetrabromobisphenol A (TBBPA)	mg/kg	EPA 3550C: 2007, GC-MS	N.D.	10	
Note:					
1. mg/kg = ppm					
2. N.D. = Not Detected (< MDL)					
3. MDL = Method Detection Limit					

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Dimethyl Fumarate

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Dimethyl Fumarate	mg/kg	SGS In-house method(GZTC CHEM-TOP-095), GC-MS	N.D.	0.1	0.1
Comment			PASS		

Note:

1. mg/kg = ppm

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

3. MDL = Method Detection Limit

Reference Information (2009/251/EC requirement):

The presence of DMF in products should be determined against the maximum limit of 0.1 mg DMF per kg of product or part of the product.

Description for specimen 2 : Silvery metal pin (from red style)

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	-	IEC 62321: 2008, UV-Vis	Negative	\diamond	#

Note:

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

4. \diamondsuit = Spot test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;

(The tested sample should be further verified by boiling water extraction method if the spot test result is negative or cannot be confirmed.)

Boiling water extraction:

Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling water extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

- 5. # = Positive indicates the presence of CrVI on the tested area.
- Negative indicates the absence of CrVI on the tested area.

6. "-" = Not regulated

Remark<1>: Results of specimen 1 shown are of the total weight of mixed samples Remark<2>: The specimen 1 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 and only for reference.



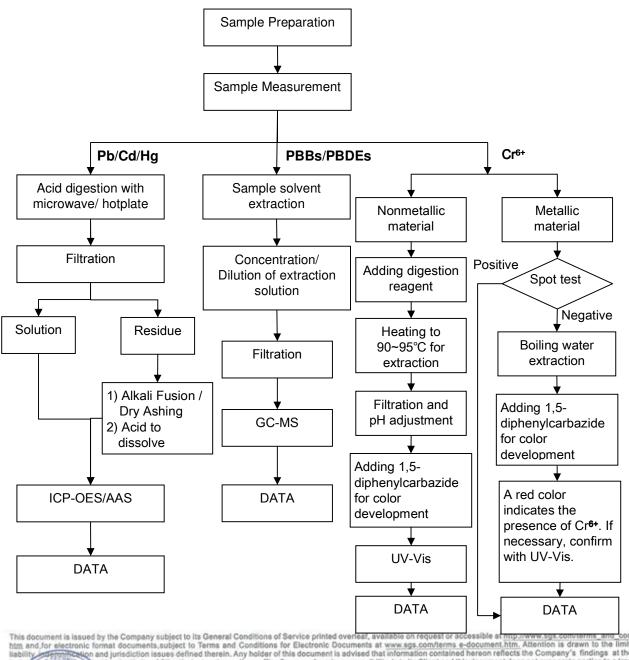
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RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu / Ross Zhan
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart

(Cr6+ and PBBs/PBDEs test method excluded).



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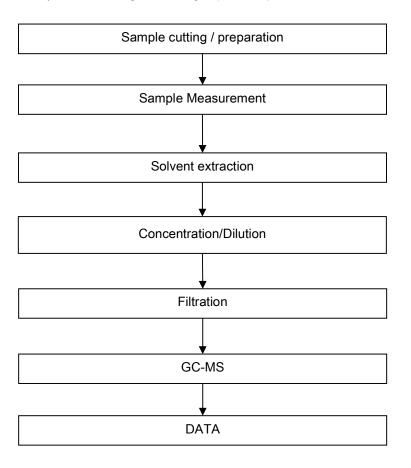


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PAHs Testing Flow Chart

1) Name of the person who made testing: Cutey Yu

2) Name of the person in charge of testing: Ryan Yang



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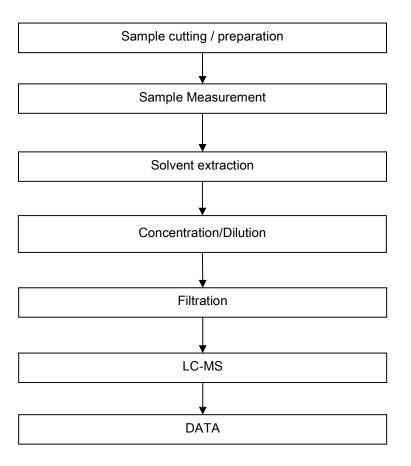


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PFOA / PFOS Testing Flow Chart

1) Name of the person who made testing: Cindy Huang

2) Name of the person in charge of testing: Ryan Yang



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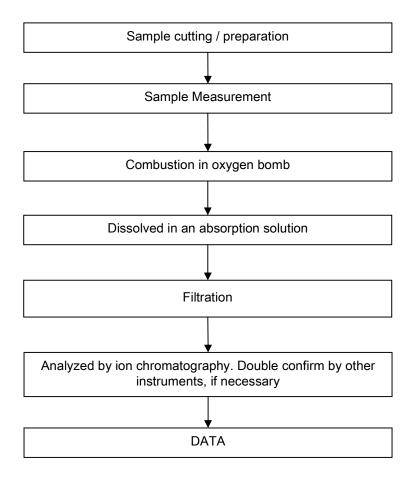


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Halogen Testing Flow Chart

1) Name of the person who made testing: Liang Wang

2) Name of the person in charge of testing: Michelle Song



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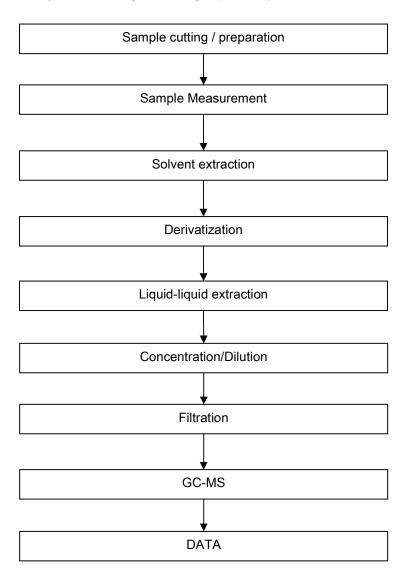


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TBBP-A Testing Flow Chart

1) Name of the person who made testing: Cutey Yu

2) Name of the person in charge of testing: Ryan Yang



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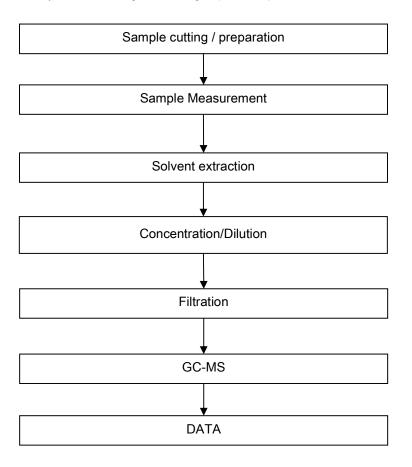


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Dimethyl Fumarate Testing Flow Chart

1) Name of the person who made testing: Tina Zhao

2) Name of the person in charge of testing: Ryan Yang



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