

Test Report

Report No. SCL01I02216301

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Applicant DONG GUAN BRIGHT LED ELECTRONICS LTD

Address NO.8,GAO LONG EAST RD ,GAOBU TOWN,DONG GUAN CTY,GUANG DONG
PROVINCE,CHINA 523283

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

No.	Sample Name(s)
(1)	Lamp、End Look series 支架
(2)	Lamp、End Look series 树脂

Sample Received Date Mar. 29, 2016

Testing Period Mar. 29, 2016 to Apr. 7, 2016

Test Requested

1.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), Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I), Dimethyl fumarate(DMF), Tetrabromobisphenol-A(TBBP-A), Perfluorooctane Sulfonates(PFOS), Phthalates, Polycyclic Aromatic Hydrocarbons (PAHs) in the submitted sample(s).
2.As specified by client, to screen the Red phosphorus, Diantimony trioxide(Sb_2O_3) in the submitted sample(s).

Test Method

Please refer to the following page(s).

Test Result(s)

Please refer to the following page(s).

Tested by

Tang Gong

Reviewed by

Emma Xiao

Approved by

Danny Liu

Date

Apr. 7, 2016

Danny Liu

Technical Manager

No. R169561790

Centre Testing International Group Co.,Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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Test Method

Tested 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
	IEC 62321-7-1:2015	
Polybrominated Biphenyls(PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Fluorine (F)	Refer to BS EN 14582:2007	IC
Chlorine (Cl)	Refer to BS EN 14582:2007	IC
Bromine (Br)	Refer to BS EN 14582:2007	IC
Iodine (I)	Refer to BS EN 14582:2007	IC
Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996 & US EPA 8270D:2007	GC-MS
Polycyclic Aromatic Hydrocarbons (PAHs)	AfPS GS 2014:01 PAK	GC-MS
Dimethyl Fumarate(DMF)	Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS
Tetrabromobisphenol-A (TBBP-A)	Refer to US EPA 3540C:1996 & US EPA 8270D:2007	GC-MS
Perfluorooctane Sulfonates(PFOS)	Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
Phthalates	Refer to EN 14372:2004(E)	GC-MS
Red phosphorus *	Refer to US EPA 3052:1996 & US EPA 6010C:2007	ICP-OES
Diantimony trioxide (Sb ₂ O ₃)*	Refer to US EPA 3052:1996 & US EPA 6010C:2007	ICP-OES

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Test Result(s)

Tested Item(s)	Result		MDL
	(1)	(2)	
Lead(Pb)	N.D.	N.D.	2 mg/kg
Cadmium(Cd)	N.D.	N.D.	2 mg/kg
Mercury(Hg)	N.D.	N.D.	2 mg/kg
Hexavalent Chromium(Cr(VI))	---	N.D.	2 mg/kg
	N.D. (Negative)	---	0.02µg/cm ²

Tested Item(s)	Result	MDL
	(2)	
Polybrominated Biphenyls(PBBs)		
Monobromobiphenyl	N.D.	5 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
Polybrominated Diphenyl Ethers(PBDEs)		
Monobromodiphenyl ether	N.D.	5 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

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Test Result(s)

Tested Item(s)	Result	MDL
	(2)	
Halogen(s)		
Fluorine (F)	N.D.	10 mg/kg
Chlorine (Cl)	696 mg/kg	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg
Iodine (I)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	(2)	
Hexabromocyclododecane (HBCDD)	N.D.	5 mg/kg
Dimethyl Fumarate(DMF)	N.D.	0.1 mg/kg
Tetrabromobisphenol-A (TBBP-A)	N.D.	5 mg/kg
Perfluorooctane Sulfonates(PFOS)	N.D.	5 mg/kg

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Limits for PAHs content (mg/kg) for material of (grip) surfaces, which are to be categorized on account of the results of the risk analysis.

Parameters	Category 1	Category 2		Category 3	
	Materials intended to be put in the mouth or materials of toys with foreseeable long-term skin contact (longer than 30 seconds)	Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or repeated short-term skin contact [#]		Materials not covered by category 1 or 2 with foreseeable skin contact up to 30 seconds (short-term skin contact)	
		Toys covered by Directive 2009/48/EC	Other products	Toys covered by Directive 2009/48/EC	Other products
Benzo[a]pyrene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[e]pyrene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[a]anthracene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[b]fluoranthene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[j]fluoranthene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[k]fluoranthene	<0.2	<0.2	<0.5	<0.5	<1
Chrysene	<0.2	<0.2	<0.5	<0.5	<1
Dibenz[a,h]anthracene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[g,h,i]perylene	<0.2	<0.2	<0.5	<0.5	<1
Indenol[1,2,3-cd]pyrene	<0.2	<0.2	<0.5	<0.5	<1
Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene	<1 Sum	<5 Sum	<10 Sum	<20 Sum	<50 Sum
Naphthalene	<1	<2		<10	
Sum 18 PAHs	<1	<5	<10	<20	<50

[#] Formulation "of repeated short-term skin contact" REACH Annex XVII No. 50 supplement (REGULATION (EU) No.1272/2013)

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Test Result(s)

Tested Item(s)	Result	MDL
	(2)	
Polycyclic Aromatic Hydrocarbons(PAHs)		
Naphthalene	N.D.	0.2 mg/kg
Acenaphthylene	N.D.	0.2 mg/kg
Acenaphthene	N.D.	0.2 mg/kg
Fluorene	N.D.	0.2 mg/kg
Phenanthrene	N.D.	0.2 mg/kg
Anthracene	N.D.	0.2 mg/kg
Fluoranthene	N.D.	0.2 mg/kg
Pyrene	N.D.	0.2 mg/kg
Benzo[a]anthracene	N.D.	0.2 mg/kg
Chrysene	N.D.	0.2 mg/kg
Benzo[b]fluoranthene	N.D.	0.2 mg/kg
Benzo[k]fluoranthene	N.D.	0.2 mg/kg
Benzo[a]pyrene	N.D.	0.2 mg/kg
Indeno[1,2,3-cd]pyrene	N.D.	0.2 mg/kg
Dibenzo[a,h]anthracene	N.D.	0.2 mg/kg
Benzo[g,h,i]perylene	N.D.	0.2 mg/kg
Benzo[j]fluoranthene	N.D.	0.2 mg/kg
Benzo[e]pyrene	N.D.	0.2 mg/kg
Sum (Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene)	N.D.	/
Sum 18 PAHs	N.D.	/

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Test Result(s)

Tested Item(s)	Result	MDL
	(2)	
Phthalates		
Dimethyl phthalate(DMP) CAS#:131-11-3	N.D.	50 mg/kg
Diethyl phthalate(DEP) CAS#:84-66-2	N.D.	50 mg/kg
Dipropyl phthalate(DPRP) CAS#:131-16-8	N.D.	50 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Dipentyl phthalate(DPP) CAS#:131-18-0	N.D.	50 mg/kg
Diheptyl phthalate(DHP) CAS#:3648-21-3	N.D.	50 mg/kg
Butylbenzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Dicyclohexyl phthalate(DCHP) CAS#:84-61-7	N.D.	50 mg/kg
Di-2-ethylhexyl phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisooctyl phthalate(DIOP) CAS#:27554-26-3	N.D.	50 mg/kg
Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	50 mg/kg
Diisononyl phthalate(DINP) CAS#:28553-12-0, 68515-48-0	N.D.	50 mg/kg
Diisodecyl phthalate(DIDP) CAS#:26761-40-0, 68515-49-1	N.D.	50 mg/kg
Dinonyl phthalate(DNP) CAS#:84-76-4	N.D.	50 mg/kg
Diisononyl adipate(DINA) CAS#:33703-08-1	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP) CAS#:84-75-3	N.D.	50 mg/kg
Dimethoxyethyl phthalate (DMEP) CAS#:117-82-8	N.D.	50 mg/kg

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Test Result(s)

Test Item(s)	Result	MDL
	(2)	
Red phosphorus*	427 mg/kg	20 mg/kg
Diantimony trioxide (Sb ₂ O ₃)*	N.D.	5 mg/kg

Tested Sample/Part Description

- (1) Metal with silver-white plating, metal with silver-white/light golden plating and metal with silver-white/golden plating[#]
- (2) Transparent resin

Remark: 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

-Negative = Absence of Cr (VI). The Cr (VI) concentration detected in the boiling water extraction solution is less than 0.10µg/cm²

-*Calculated result of Red phosphorus is based on the result of Phosphorus(P).

Calculated result of Diantimony trioxide is based on the result of Antimony (Sb).

The MDL is evaluated for element(Phosphorus(P), Antimony(Sb)).

-[#] As specified by client, the test was conducted by mixing several samples together.

The result(s) shown on this report may be different from the content of any homogeneous material.

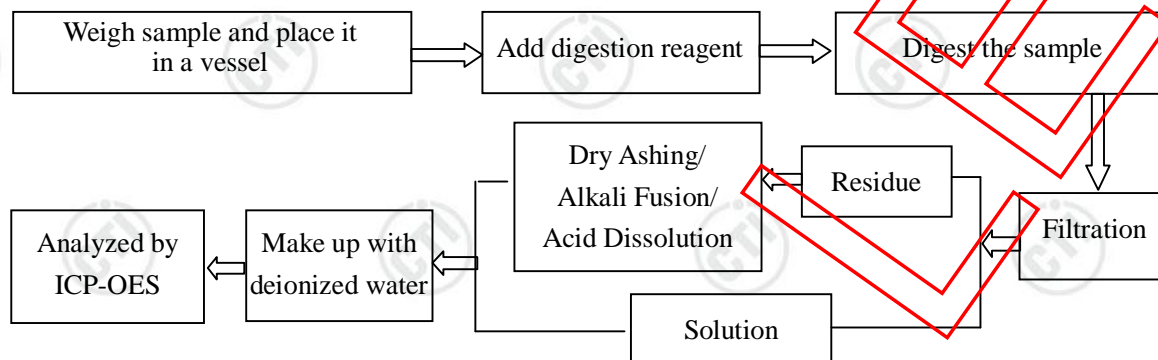
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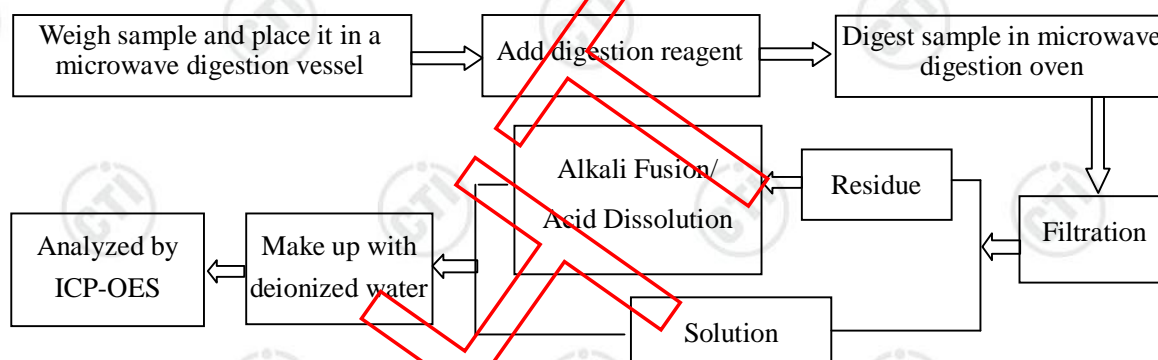
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Test Process

1. Lead(Pb), Cadmium(Cd)

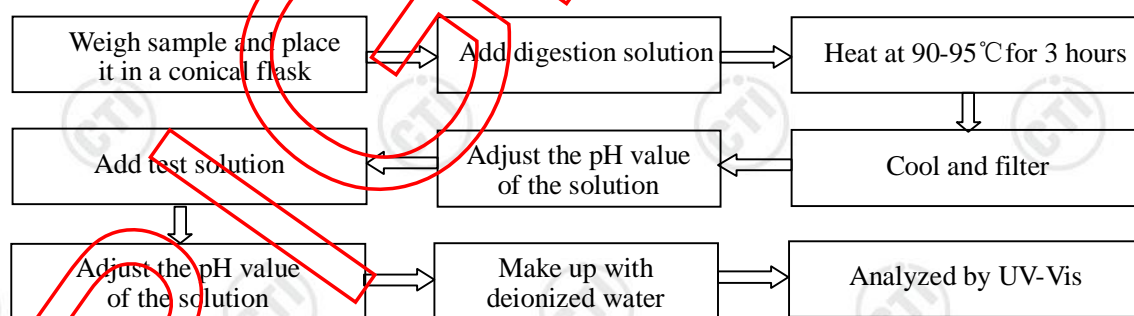


2. Mercury(Hg)

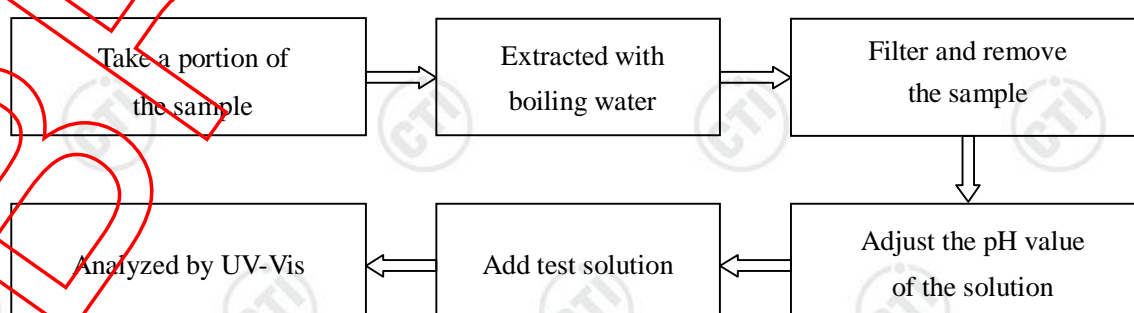


3. Hexavalent Chromium (Cr(VI))

(1) IEC 62321:2008 Ed.1 Annex C



(2) IEC 62321-7-1:2015

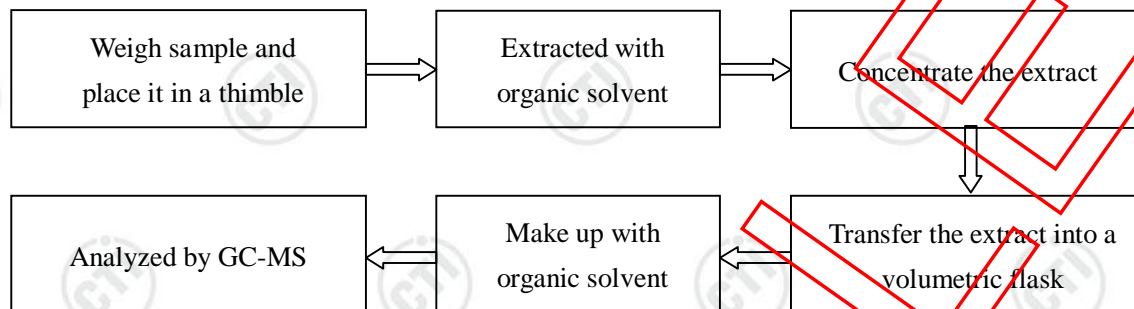


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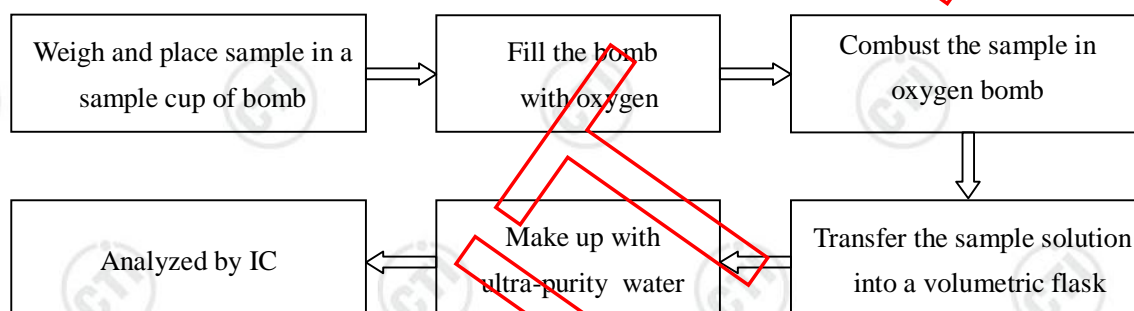
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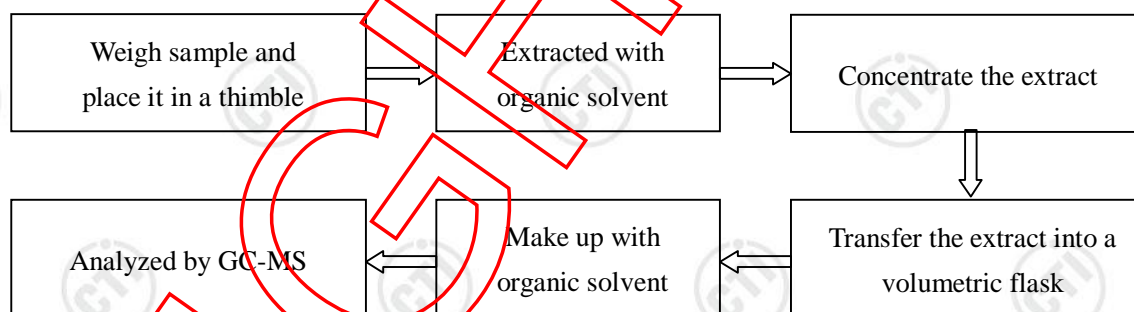
4. Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs)



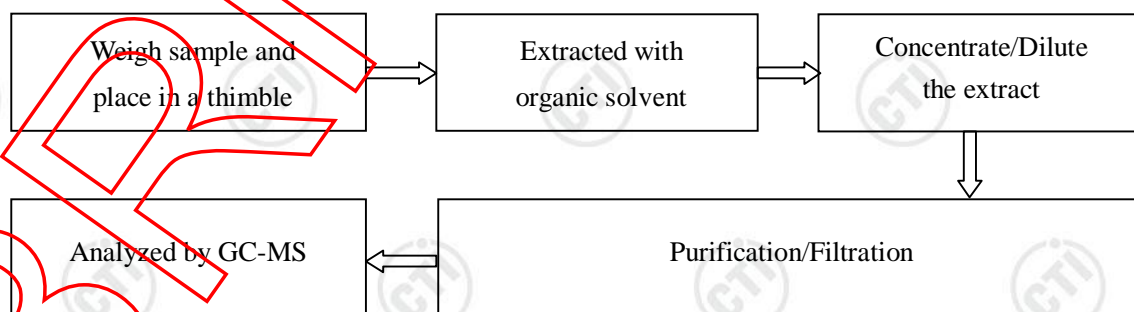
5. Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I)



6. Hexabromocyclododecane (HBCDD)



7. Polycyclic Aromatic Hydrocarbons(PAHs)

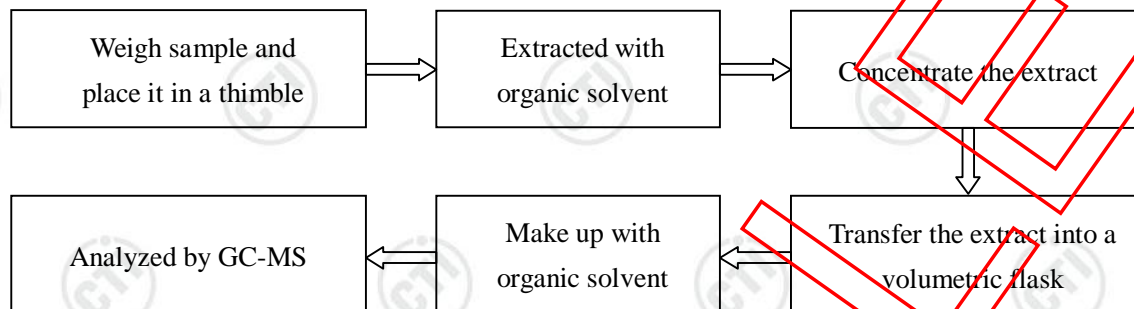


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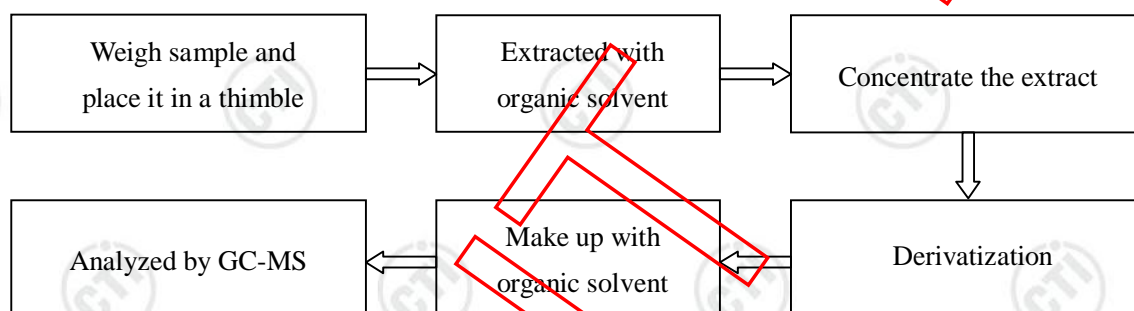
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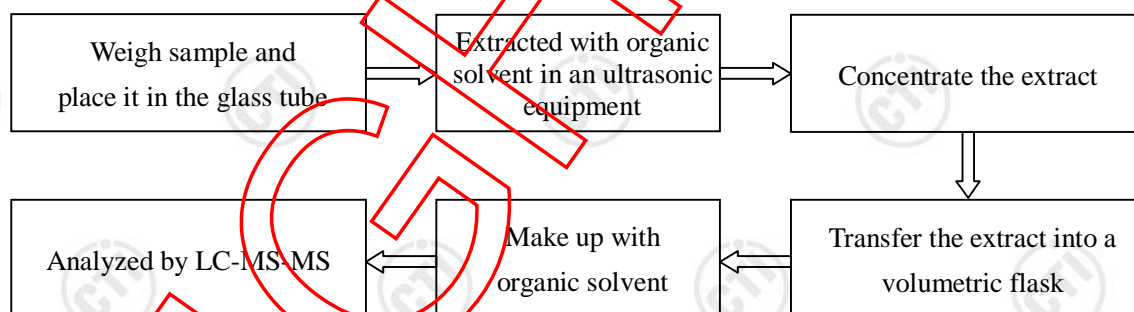
8. Dimethyl Fumarate(DMF)



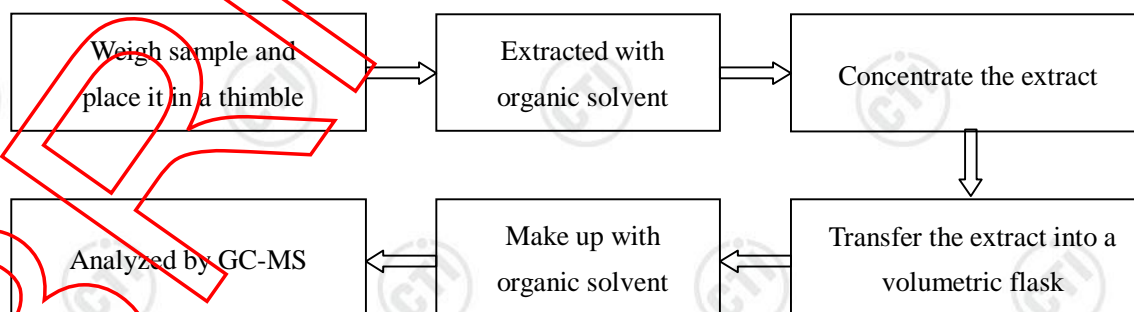
9. Tetrabromobisphenol-A (TBBP-A)



10. Perfluorooctane Sulfonates(PFOS)



11. Phthalates

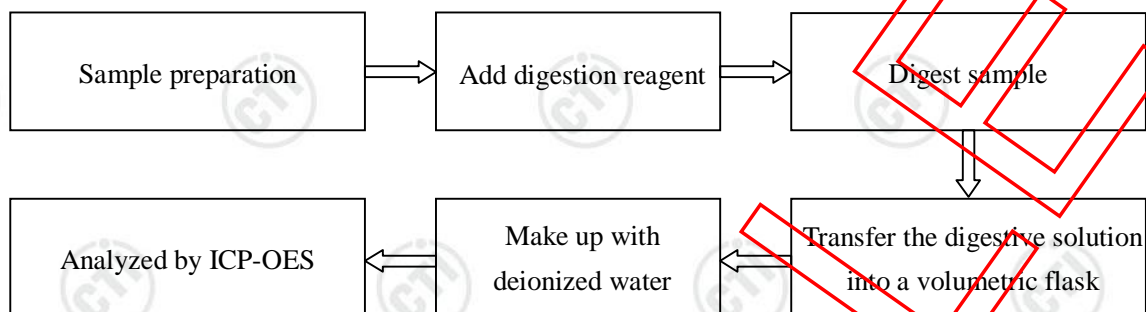


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12. Diantimony trioxide (Sb_2O_3), Red phosphorus

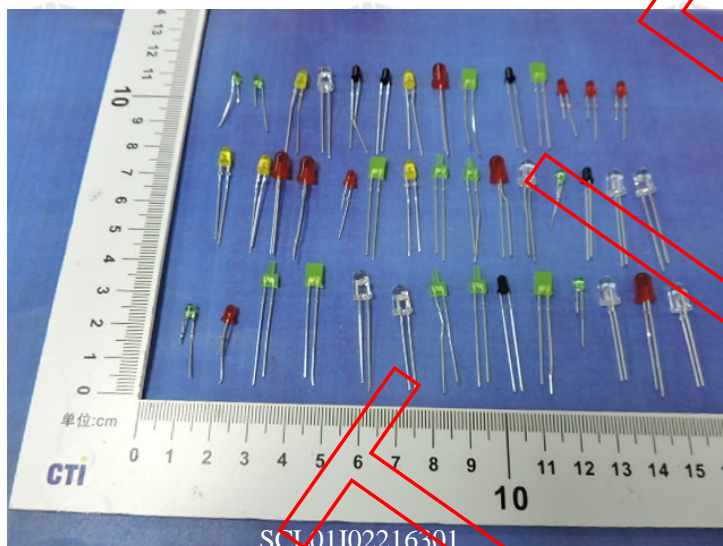


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Photo(s) of the Finished Product(s)



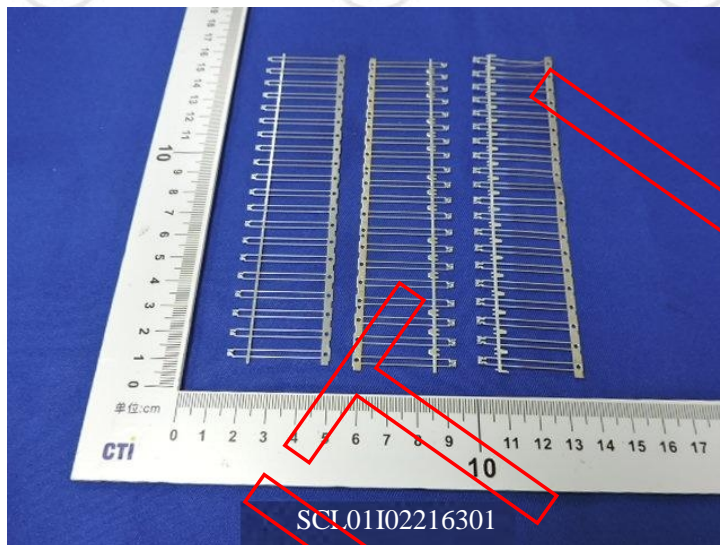
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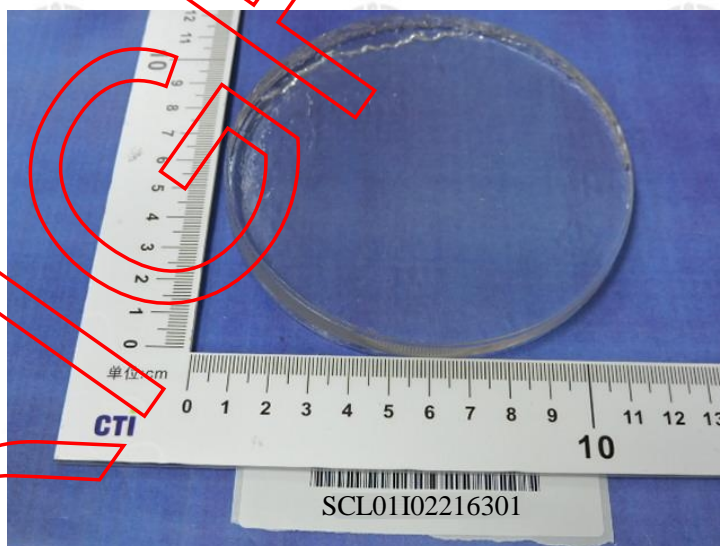
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Photo(s) of the sample(s)

(1)



(2)



*** End of Report ***

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