

Test Report

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SIRECTIFIER GLOBAL CORPORATION, DELAWARE, U. S. A.
113 BARKSDALE PROFESSIONAL CENTER IN THE CITY OF NEWARK,
COUNTY OF NEW CASTLE



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

Sample Description : DIODE
Style/Item No. : PACKAGE: TO-126, TO-92, I2PAK, TO-263, TO-252, TO-220,
TO-3P, TO-247, DO-41, DO-15, DO-27, ITO-220, SOT-23-6L,
SOT-563, SOD-123, SOT-363, SOT-353, SOT-523, SOT-323,
MSOP10, SOP-8, SOT-23, SOT-89, SOD-523, SOD-723, SOD-323,
SOD-923, SMA, SMB, SMC, DFN SERIALS, POWERLITE, DO-35,
LL41, DO-34, DO-41S, DL-35 / SOD-80ETC
Sample Receiving Date : 2009/09/23
Testing Period : 2009/09/23 TO 2009/09/30

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


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

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Test Result(s)

PART NAME NO.1 : BODY
PART NAME NO.2 : PLATING LAYER OF SILVER COLORED METAL
PART NAME NO.3 : BASE MATERIAL OF SILVER COLORED METAL

Test Item (s):	Unit	Method	MDL	Result		
				No.1	No.2	No.3
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	501	12
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	---	---
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	With reference to IEC 62321: 2008 and performed by Spot test / boiling water extraction Method. (See Note 7)	0.02mg/kg with 50 cm ² surface area			
Polychlorinated Biphenyls (PCBs) (CAS No.: 001336-36-3)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	n.d.	---	---
Polychlorinated Terphenyls (PCTs)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	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.	---	---

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Test Item (s):	Unit	Method	MDL	Result		
				No.1	No.2	No.3
Sum of PBDEs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	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.	---	---

Note : 1. mg/kg = ppm ; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

5. "----" = Not Conducted

6. ** = Qualitative analysis (No Unit)

7. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer,

Positive = Presence of Cr(VI) coating / surface layer;

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

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer.

Positive = Presence of Cr(VI) coating / surface layer;

the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

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Test Report

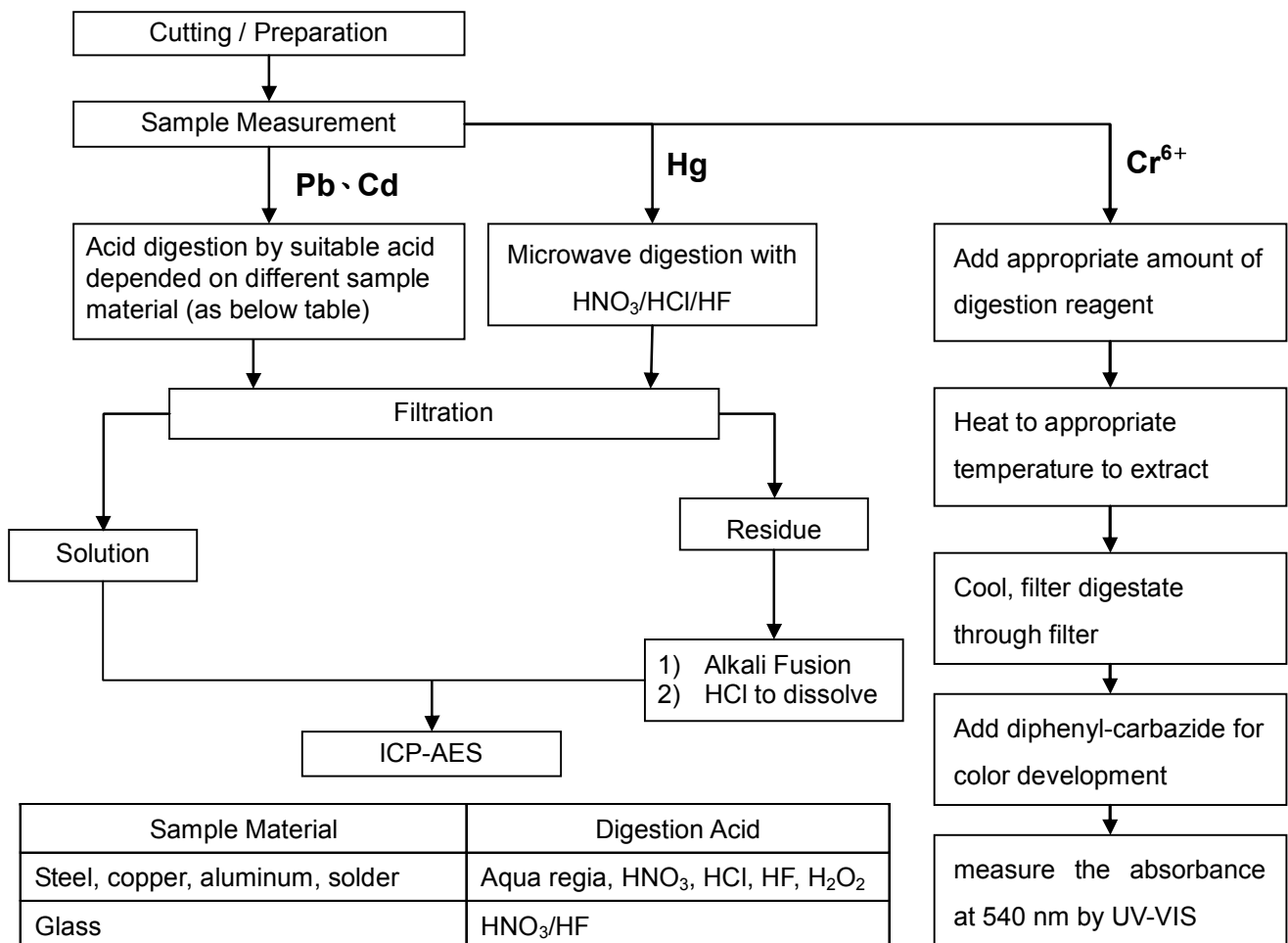
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NO.1 AND NO.3

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ 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 ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

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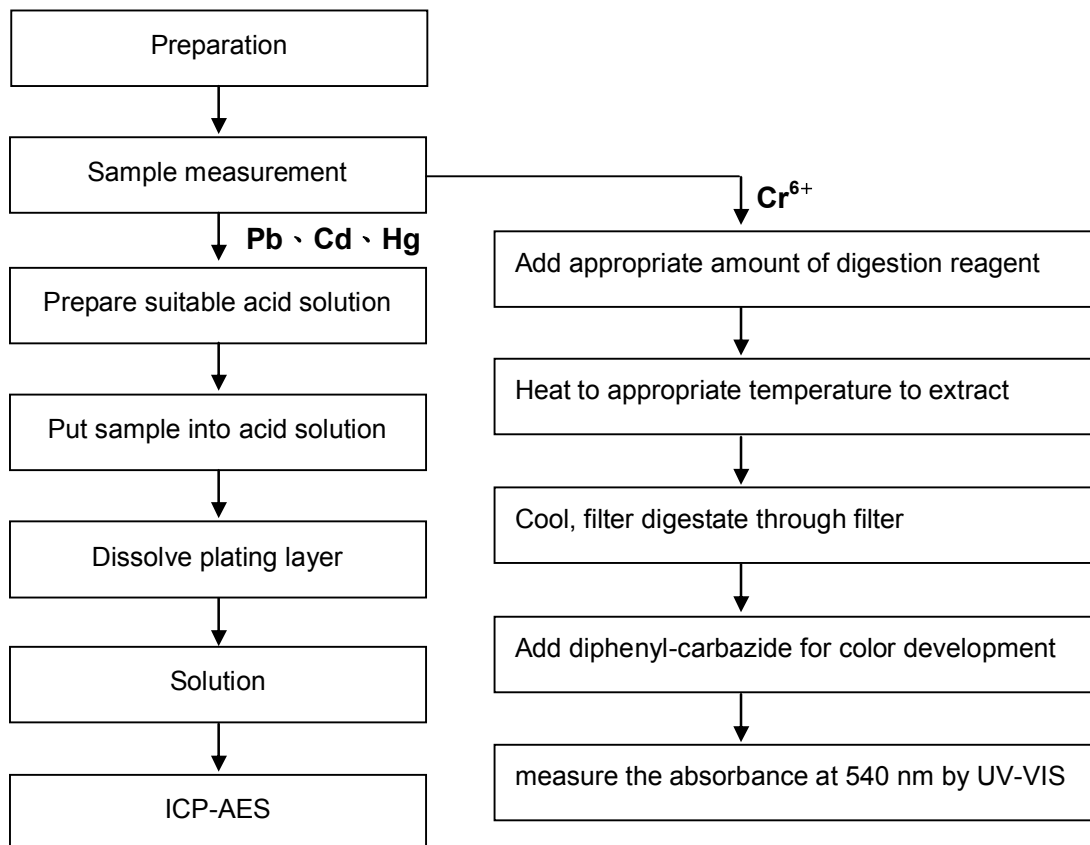
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NO.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis



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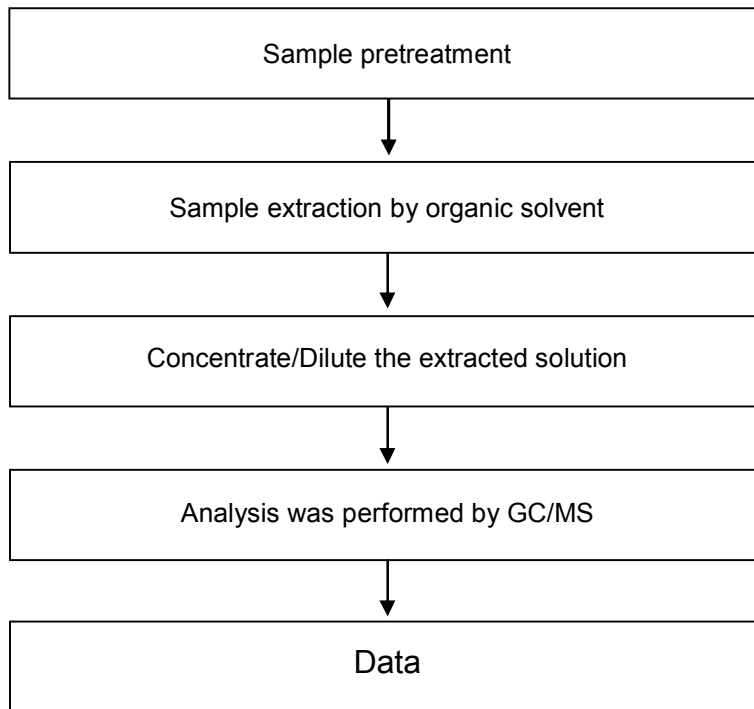
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Chlorinated Flame retardant analytical flow chart

- 1) Name of the person who made measurement: Max Liu
 - 2) Name of the person in charge of measurement: Shinjyh Chen
- Reference method: US EPA 8270D, US EPA 3540
 - Test Items: PCBs, PCNs, PCTs, Mirex, CP, MCCP



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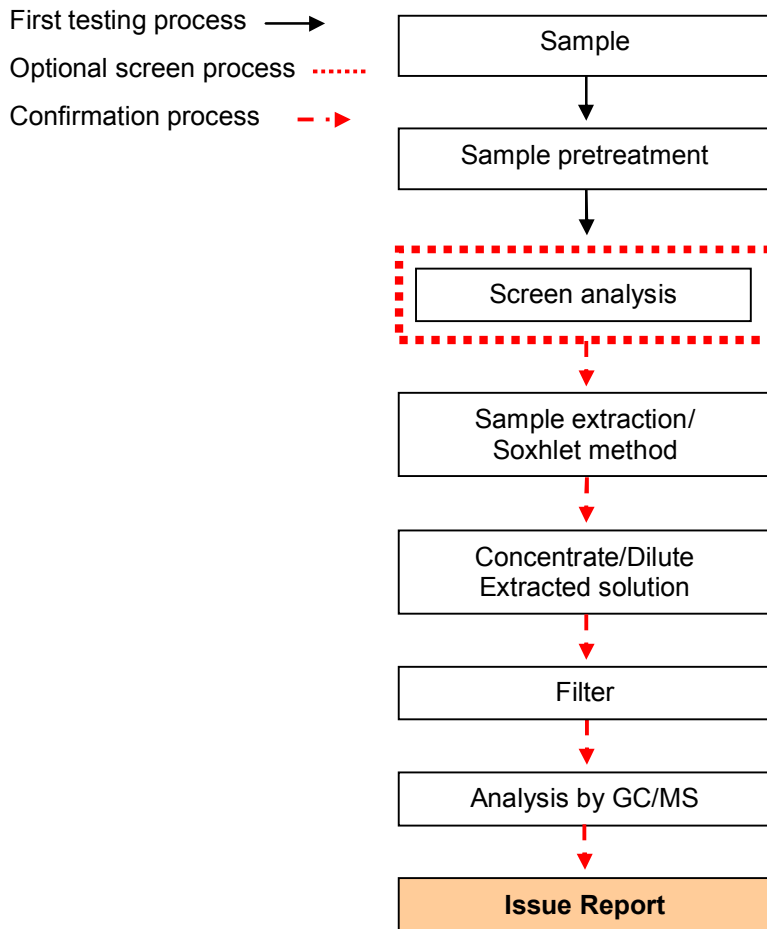
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PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Shinjyh Chen



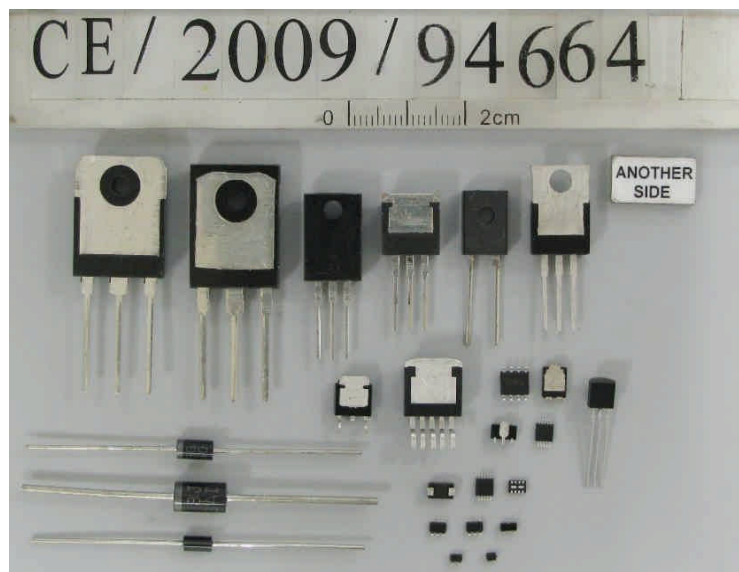
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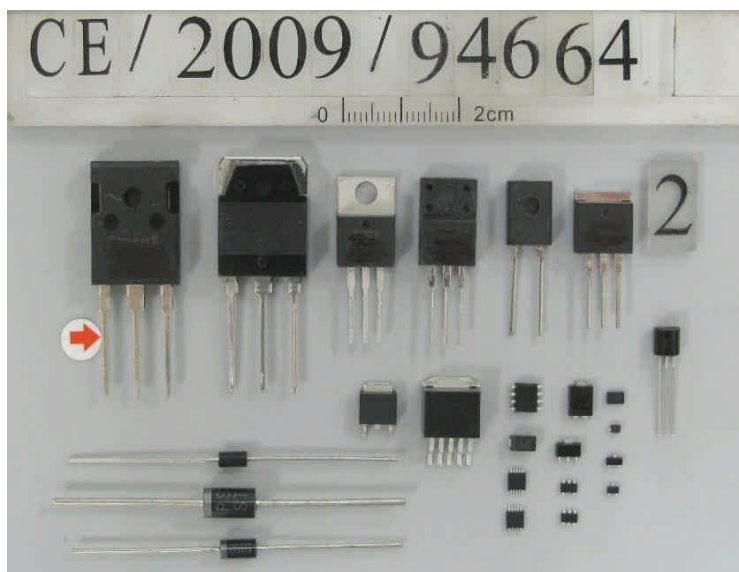
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