

## Test Report

No. : CE/2009/27188

Date : 2009/03/06

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VIGATEC CO., LTD.

2F., NO. 369-1, SEC. 2, JHONGSHAN RD., JHONGHE CITY, TAIPEI

COUNTY 235, TAIWAN



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

Sample Description : TERMINAL SERIES  
Style/Item No. : 28 SERIES  
Sample Receiving Date : 2009/02/27  
Testing Period : 2009/02/27 TO 2009/03/06

=====  
**Test Requested** : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

**Test Method** : With reference to IEC 62321: 2008  
Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.  
(1) Determination of Cadmium by ICP-AES.  
(2) Determination of Lead by ICP-AES.  
(3) Determination of Mercury by ICP-AES.  
(4) Determination of Hexavalent Chromium by Spot test / boiling water extraction Method.  
(5) Determination of PBB and PBDE by GC/MS.

**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 results by chemical method (Unit: mg/kg)

Test Item (s):	Method (Refer to)	Result		MDL
		No.1	No.2	
Cadmium (Cd)	(1)	n.d.	n.d.	2
Lead (Pb)	(2)	21	17	2
Mercury (Hg)	(3)	n.d.	n.d.	2
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	(4)	Negative	Negative	See Note 4
<b>Sum of PBBs</b>	(5)	n.d.	n.d.	-
Monobromobiphenyl		n.d.	n.d.	5
Dibromobiphenyl		n.d.	n.d.	5
Tribromobiphenyl		n.d.	n.d.	5
Tetrabromobiphenyl		n.d.	n.d.	5
Pentabromobiphenyl		n.d.	n.d.	5
Hexabromobiphenyl		n.d.	n.d.	5
Heptabromobiphenyl		n.d.	n.d.	5
Octabromobiphenyl		n.d.	n.d.	5
Nonabromobiphenyl		n.d.	n.d.	5
Decabromobiphenyl		n.d.	n.d.	5
<b>Sum of PBDEs</b>		n.d.	n.d.	-
Monobromodiphenyl ether		n.d.	n.d.	5
Dibromodiphenyl ether		n.d.	n.d.	5
Tribromodiphenyl ether		n.d.	n.d.	5
Tetrabromodiphenyl ether		n.d.	n.d.	5
Pentabromodiphenyl ether		n.d.	n.d.	5
Hexabromodiphenyl ether		n.d.	n.d.	5
Heptabromodiphenyl ether		n.d.	n.d.	5
Octabromodiphenyl ether		n.d.	n.d.	5
Nonabromodiphenyl ether		n.d.	n.d.	5
Decabromodiphenyl ether	n.d.	n.d.	5	

## TEST PART DESCRIPTION:

NO.1 : SILVER COLORED METAL (INCLUDING THE PLATING LAYER)  
NO.2 : GOLDEN COLORED METAL (INCLUDING THE PLATING LAYER)

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

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. 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 cm<sup>2</sup> sample surface area.

5. "-" = Not Regulated

6. 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.

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## Test Report

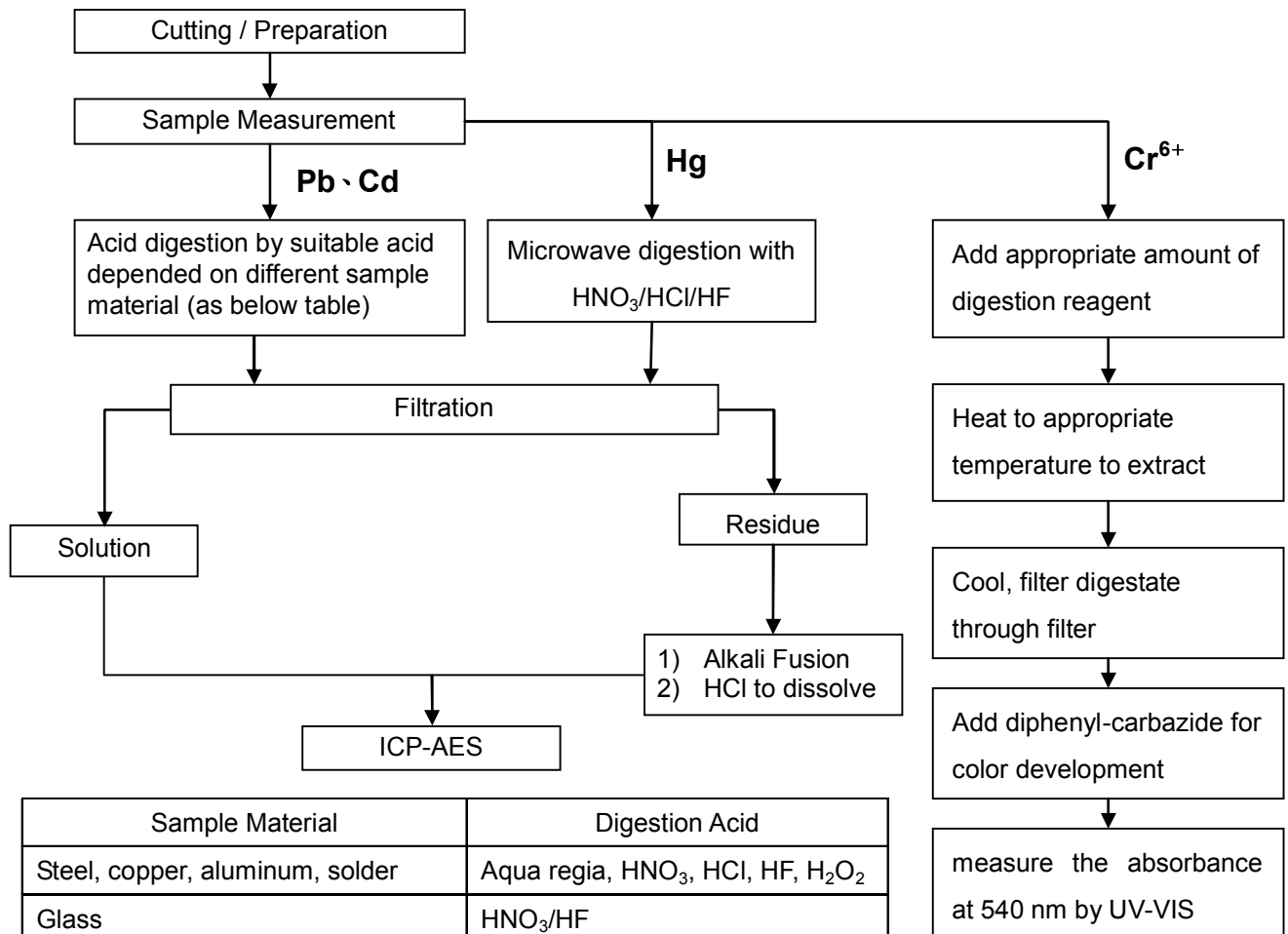
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: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



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Any acid to total digestion

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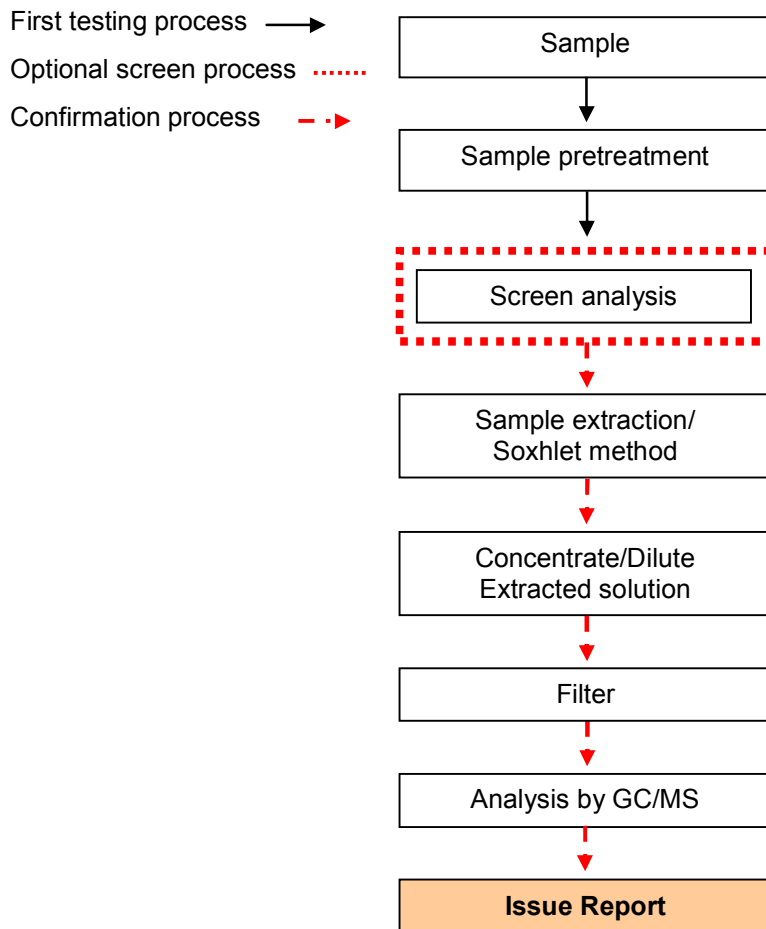
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### PBB/PBDE analytical FLOW CHART

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

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