

## Test Report

No. : CE/2010/14947    Date : 2010/02/01    Page : 1 of 8


MERCURY ELECTRONIC INDUSTRIAL CO., LTD.  
31, TING-PING RD., SHUI-FONG IND. PARK SHUI-FONG, TAIPEI-SIAN TAIWAN



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

Sample Description : SMD TYPE CRYSTAL/OSCILLATORS  
Style/Item No. : KYOCERA BASE  
7\*5 SERIES (CRYSTAL / OSCILLATORS / M.C.F)  
MQ / SWO / HF576 / HW576 / HV576 / HM57 / HPF576 / HPW576  
HDF576 / HDW576 / HSR57 / G576 / GV576 / GF576 / GW576  
GPF576 / GPW576 / GDF576 / GPW576 / GSR57 / MQ FILTERS  
HK57 / HB57 / M\_57 (V)  
6\*3.5 SERIES (CRYSTAL)  
MF  
5\*3.2 SERIES (CRYSTAL / OSCILLATORS)  
MJ / H53 / HM53 / HSR53 / G534 / GSR534 / HK53 / M\_53 (V) / HB53  
4.2\*2.5 SERIES (CRYSTAL)  
X42  
3.2\*2.5 SERIES (CRYSTAL / OSCILLATORS)  
X32 / H32 / M32 (V) / HB32  
2.0\*2.5 SERIES (CRYSTAL / OSCILLATORS)  
X22 / H22  
Sample Receiving Date : 2010/01/25  
Testing Period : 2010/01/25 TO 2010/02/01

=====  
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 Report

No. : CE/2010/14947 Date : 2010/02/01 Page : 2 of 8

MERCURY ELECTRONIC INDUSTRIAL CO., LTD.  
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## Test Result(s)

PART NAME NO.1 : MIXED ALL PARTS (NINETEEN TYPES)

Test Item (s):	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	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.
Perfluorooctane sulfonates (PFOS) PFOS – Acid PFOS – Metal Salt PFOS – Amide	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 000335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
<b>Sum of PBBs</b>	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 Report

No. : CE/2010/14947 Date : 2010/02/01 Page : 3 of 8

MERCURY ELECTRONIC INDUSTRIAL CO., LTD.  
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Test Item (s):	Unit	Method	MDL	Result
				No.1
<b>Sum of PBDEs</b>	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.
<b>Halogen</b>				
Halogen-Fluorine (F) (CAS No.: 014762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Iodine (I) (CAS No.: 014362-44-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

- Note :
1. mg/kg = ppm; 0.1wt% = 1000ppm
  2. n.d. = Not Detected
  3. MDL = Method Detection Limit
  4. " - " = Not Regulated
  5. 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.

## PFOS Reference Information : 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 1µg/m<sup>2</sup> of the coated material.

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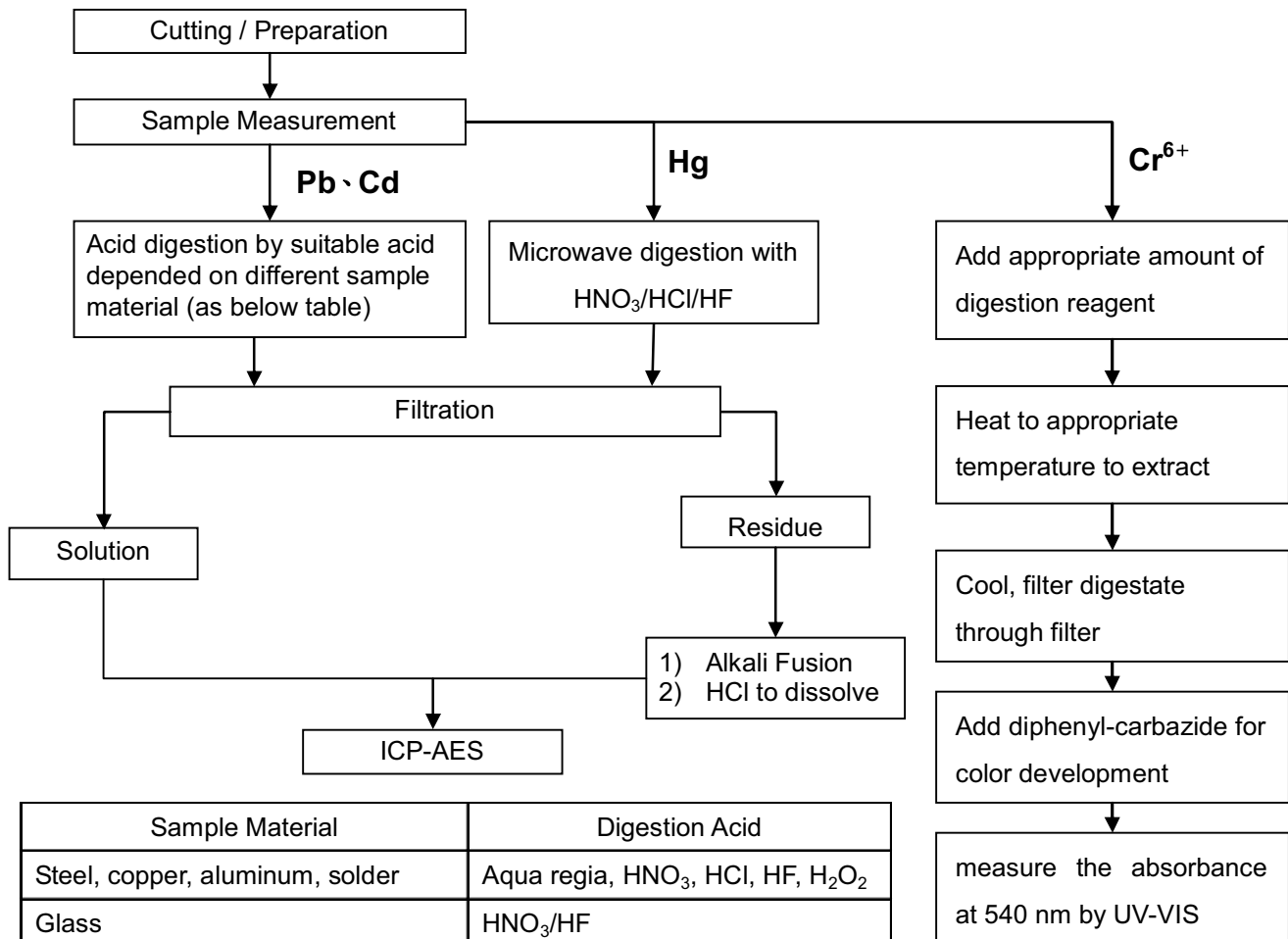
# Test Report

No. : CE/2010/14947 Date : 2010/02/01 Page : 4 of 8

MERCURY ELECTRONIC INDUSTRIAL CO., LTD.  
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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

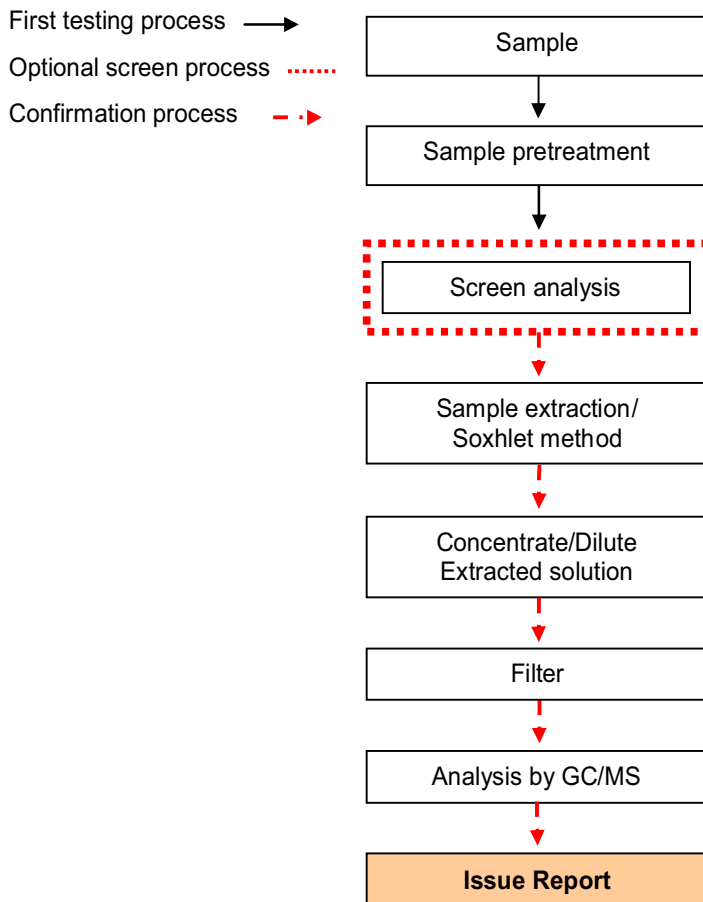
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### PBB/PBDE analytical FLOW CHART

- 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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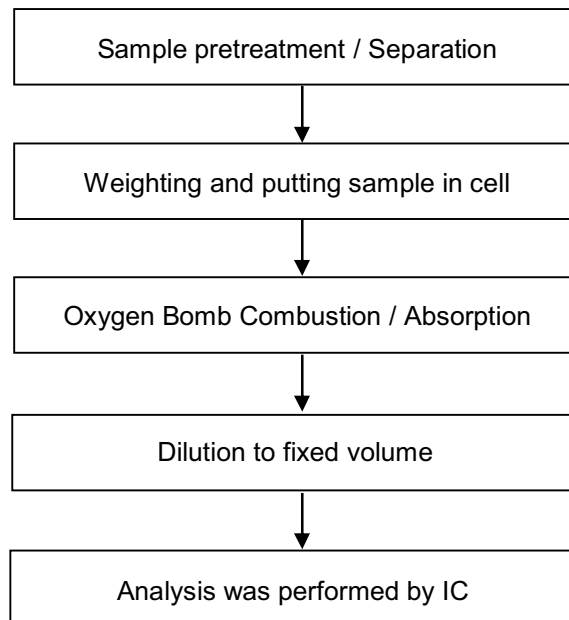
No. : CE/2010/14947 Date : 2010/02/01 Page : 6 of 8

MERCURY ELECTRONIC INDUSTRIAL CO., LTD.  
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### Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Alan Chen
- 2) Name of the person in charge of measurement: Troy Chang



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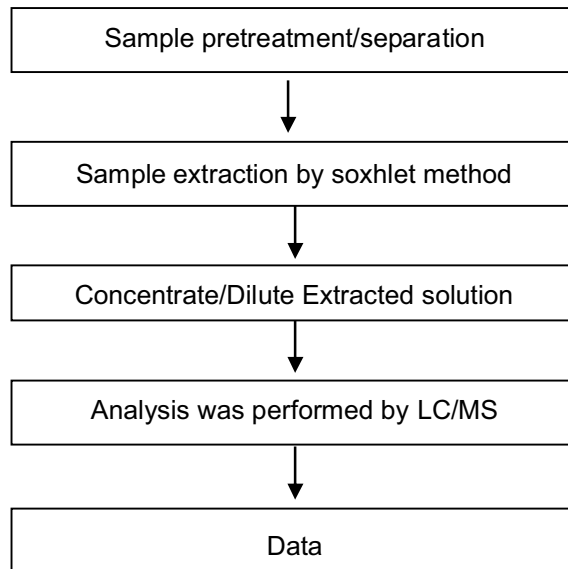
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### Analytical flow chart of Soxhlet extraction (LC/MS) procedure

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

■ Test Items: PFOS/PFOA、Benzotriazole



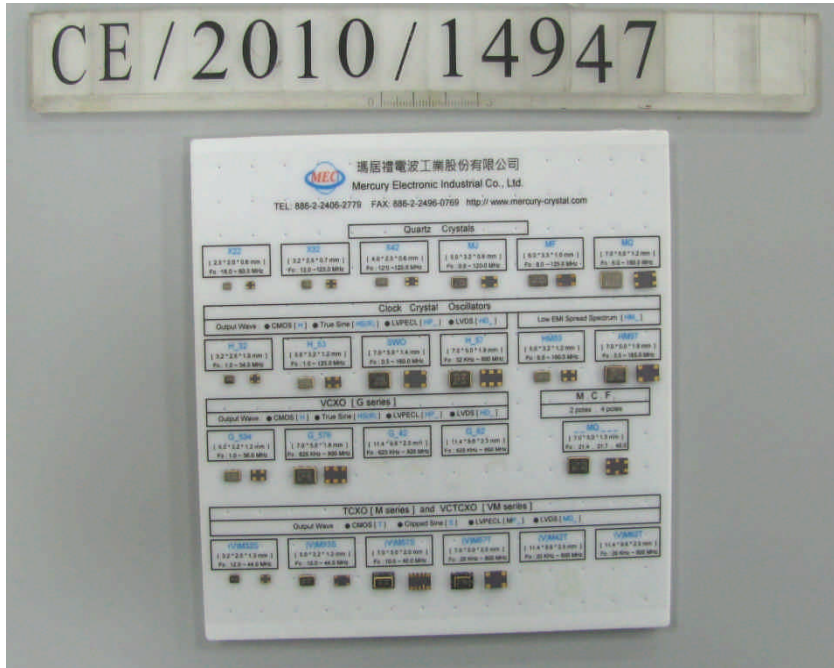
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## Test Report

No. : CE/2010/14947 Date : 2010/02/01 Page : 8 of 8

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\*\* End of Report \*\*

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