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CHIPMOS TECHNOLOGIES INC./SYNCMOS TECHNOLOGIES INTERNATIONAL,INC. NO.5, NANKE 7TH RD., SOUTHERN TAIWAN SCIENCE PARK, TAINAN COUNTY, TAIWAN, R.O.C.

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

Sample Description IC QFP Sample Receiving Date 2010/03/23

**Testing Period** 2010/03/23 TO 2010/03/29

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

Ray Chang / Asst. Manager Signed for and on behalf of

**SGS Taiwan Limited** 

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### Test Result(s)

PART NAME NO.1 **BLACK IC QFP** PART NAME NO.2 SILVER IC QFP

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	8.31
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	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 5)	0.02mg/k g with 50 cm <sup>2</sup> surface area		Negative
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.	n.d.
Monobromobiphenyl			5	n.d.	n.d.
Dibromobiphenyl			5	n.d.	n.d.
Tribromobiphenyl			5	n.d.	n.d.
Tetrabromobiphenyl			5	n.d.	n.d.
Pentabromobiphenyl			5	n.d.	n.d.
Hexabromobiphenyl			5	n.d.	n.d.
Heptabromobiphenyl			5	n.d.	n.d.
Octabromobiphenyl			5	n.d.	n.d.
Nonabromobiphenyl			5	n.d.	n.d.
Decabromobiphenyl			5	n.d.	n.d.
Sum of PBDEs			-	n.d.	n.d.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.	n.d.
Dibromodiphenyl ether			5	n.d.	n.d.
Tribromodiphenyl ether			5	n.d.	n.d.
Tetrabromodiphenyl ether			5	n.d.	n.d.
Pentabromodiphenyl ether			5	n.d.	n.d.
Hexabromodiphenyl ether			5	n.d.	n.d.
Heptabromodiphenyl ether			5	n.d.	n.d.
Octabromodiphenyl ether			5	n.d.	n.d.
Nonabromodiphenyl ether			5	n.d.	n.d.
Decabromodiphenyl ether			5	n.d.	n.d.

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Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
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.	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.	n.d.

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

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

5. 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.

6. "---" = Not Conducted

7. \*\* = Qualitative analysis (No Unit)

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#### 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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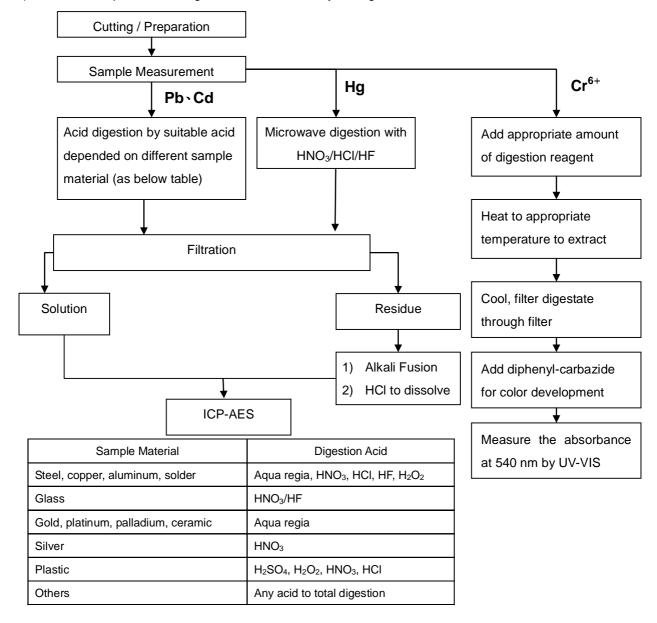


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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ test method excluded)
- 2) Name of the person who made measurement: Hungming Li
- Name of the person in charge of measurement: Ray Chang



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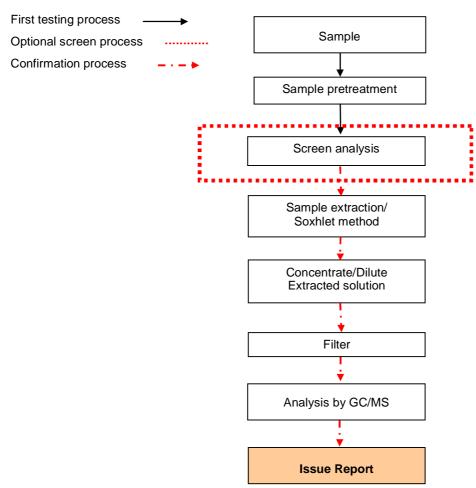
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### PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



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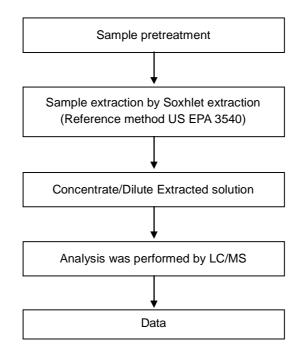
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### Analytical flow chart of PFOA/PFOS content

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



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\*\* End of Report \*\*

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