



# TEST REPORT

NO.: A002C1005172204E

Date: May. 21, 2010

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**Customer:** Nantong Fujitsu Microelectronic Co., Ltd

**Address:** No.288, Chongchuan Road, Nantong, Jiangsu, China

**Report on the submitted sample said to be**

**Sample name:** TO247-3

**Model:** /

**Item/Lot No.:** /

**Material:** /

**Buyer:** /

**Supplier:** /

**Manufacturer:** /

**Sample received date:** May. 17, 2010

**Testing period:** From May. 17, 2010 to May. 21, 2010

## Testing Requested:

1. As specified by client, to determine the Lead, Cadmium, Mercury, Hexavalent Chromium, PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).
2. As specified by client, to determine PFOS content in the submitted samples in accordance with Directive 2006/122/EC.
3. As specified by client, to determine the PFOA content in the submitted samples in accordance with POHS.
4. As specified by client, to determine the Fluorine, Chlorine, Bromine and Iodine content in the submitted sample.
5. As specified by client, to determine the Antimony content in the submitted sample.

## Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC

\*\*\*\*\*FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)\*\*\*\*\*

Written by  
(Reporter)

Eileen

Approved by  
(Lab manager)

Wuikang

Inspected by  
(Technical manager)

Weikin

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**Testing method:**

| Testing Item                        | Pretreatment method          | Measuring instrument | MQL                    |
|-------------------------------------|------------------------------|----------------------|------------------------|
| Lead (Pb)                           | IEC 62321: 2008, section 8/9 | ICP-OES              | 2 mg/kg                |
| Cadmium (Cd)                        | IEC 62321: 2008, section 8/9 | ICP-OES              | 2 mg/kg                |
| Mercury (Hg)                        | IEC 62321: 2008, section 7   | ICP-OES              | 2 mg/kg                |
| Chromium (Cr VI)                    | IEC 62321: 2008, Annex B/C   | UV-VIS               | 0.02 mg/kg*<br>2 mg/kg |
| PBBs/ PBDEs                         | IEC 62321: 2008, Annex A     | GC-MS                | 5 mg/kg                |
| PFOS                                | US EPA 3540C: 1996           | LC-MSD               | 10 mg/kg               |
| PFOA                                | US EPA 3550C: 2007           | GC-MS                | 5 mg/kg                |
| Fluorine/ Chlorine/ Bromine/ Iodine | BS EN 14582: 2007            | IC                   | 50 mg/kg               |
| Antimony (Sb)                       | US EPA3050B: 1996            | ICP-OES              | 2 mg/kg                |

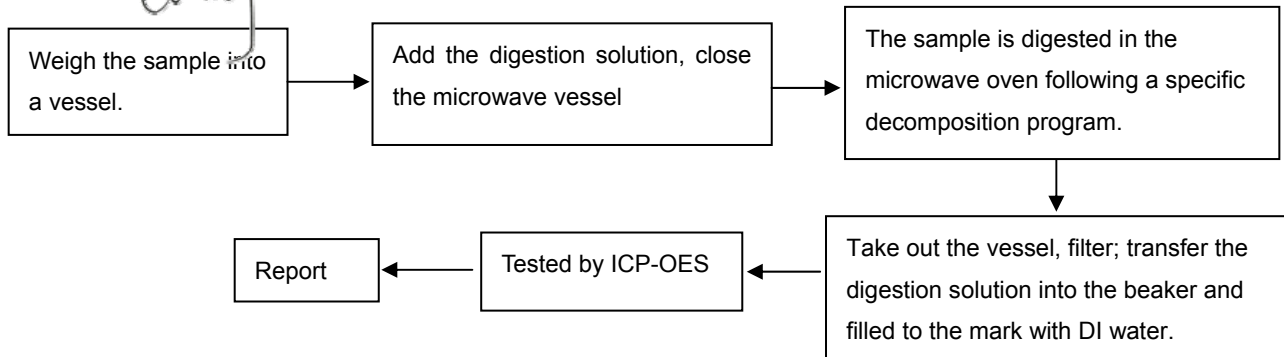
**Note:**

- \*0.02 mg/kg refers to the MQL of sample extraction liquid.

**Test Flow:**

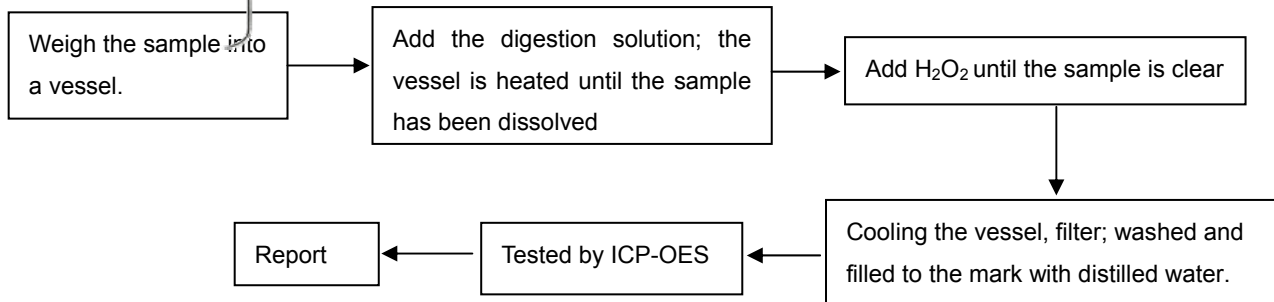
1. To Determine Lead, Cadmium Content (for Polymer):

Tested by: *Condy*



2. To Determine Lead, Cadmium Content (for metal):

Tested by: *Condy*



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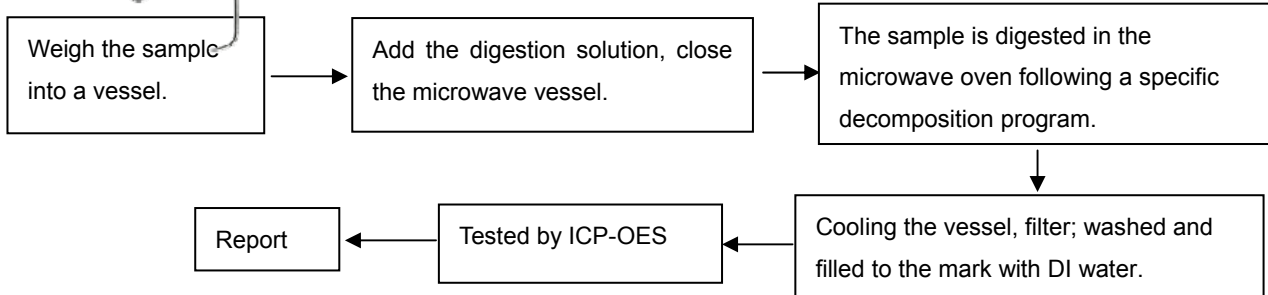
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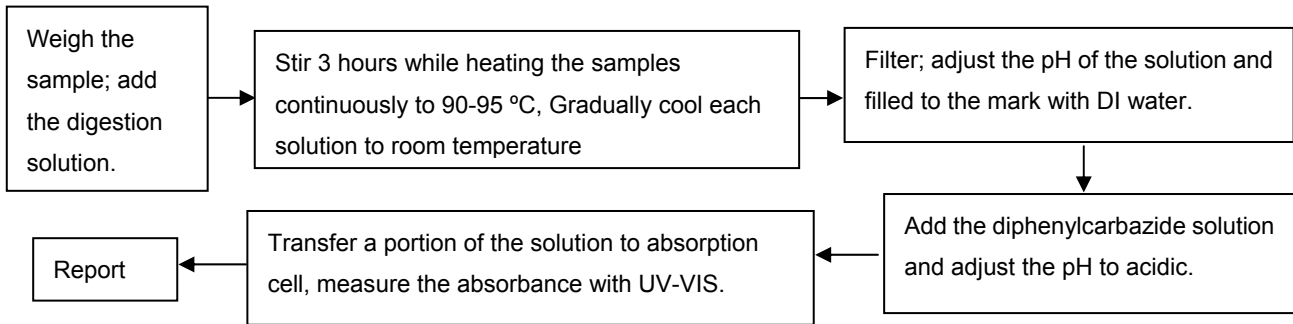
### 3. To Determine Mercury Content:

Tested by: *Condy*



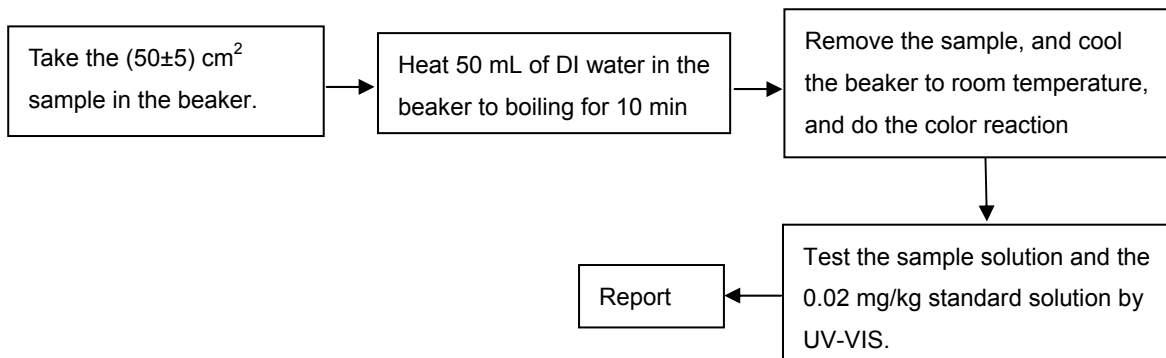
### 4. To Determine Hexavalent Chromium Content (for Polymer):

Tested by: *Danae*



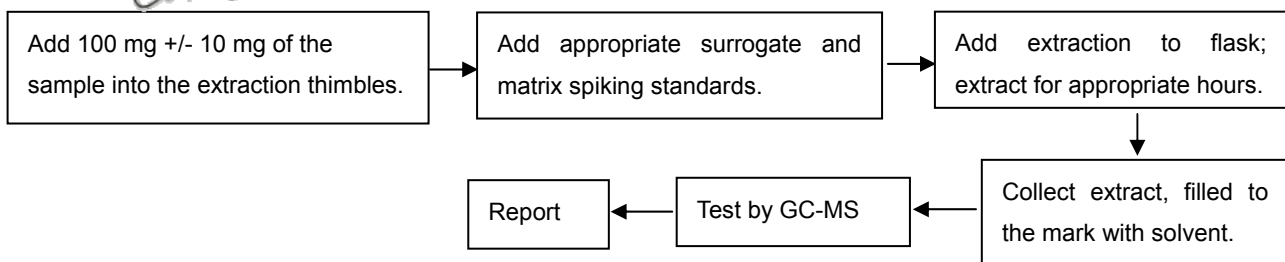
### 5. To Determine Hexavalent Chromium Content (boiling- water- extraction) in metals:

Tested by: *Danae*



### 6. To Determine PBBs/PBDEs Content:

Tested by: *Carina*



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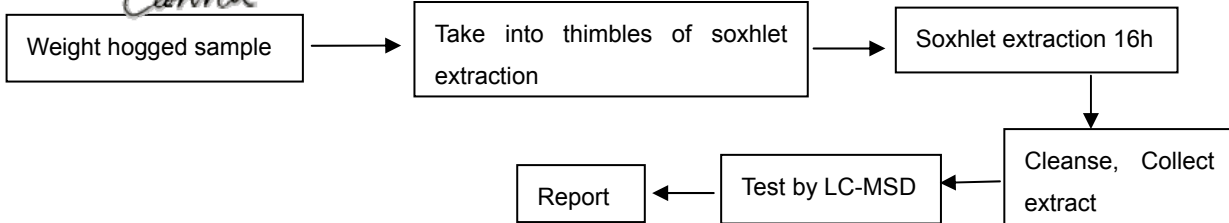
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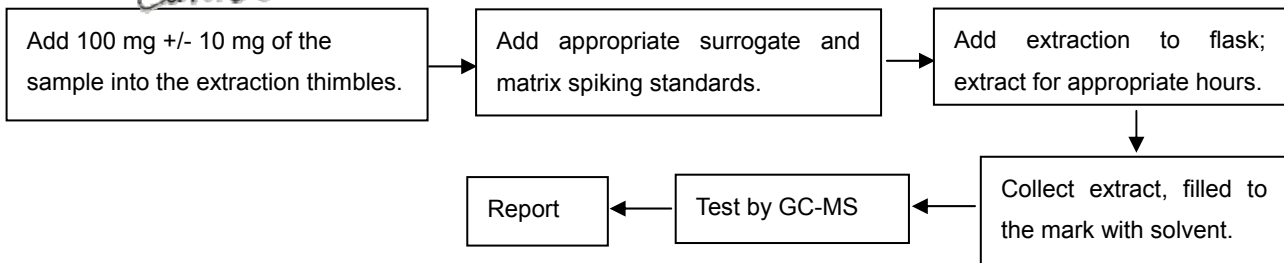
7. To Determine PFOS Content:

Tested by: *Carina*



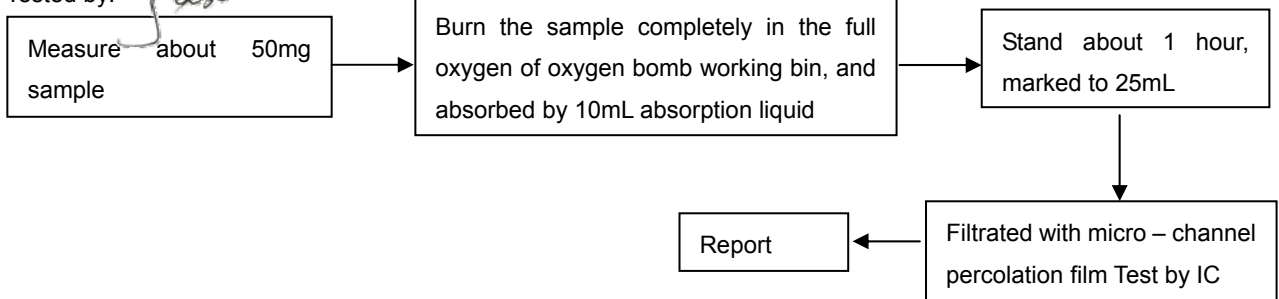
8. To Determine PFOA Content:

Tested by: *Carina*



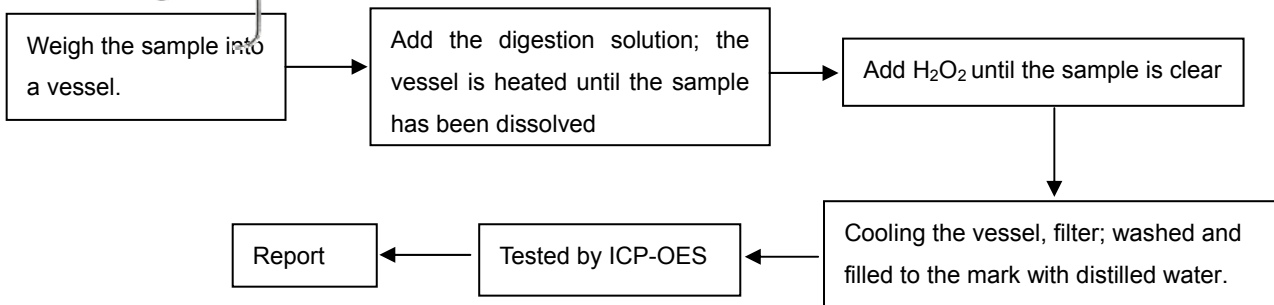
9. To Determine Fluorine, Chlorine, Bromine and Iodine Content:

Tested by: *Jason*



10. To Determine Antimony Content:

Tested by: *Candy*



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**Test Results:**

| Item                                          | Unit  | RoHS Limit | A    | B        |
|-----------------------------------------------|-------|------------|------|----------|
| Lead (Pb)                                     | mg/kg | 1000       | N.D. | N.D.     |
| Cadmium (Cd)                                  | mg/kg | 100        | N.D. | N.D.     |
| Mercury (Hg)                                  | mg/kg | 1000       | N.D. | N.D.     |
| Chromium(CrVI)<br>by boiling water extraction | /     | /          | /    | Negative |
| Chromium (CrVI)                               | mg/kg | 1000       | N.D. | /        |

| Flame Retardants | Unit  | RoHS Limit | A    |
|------------------|-------|------------|------|
| PBBs             | mg/kg | 1000       | N.D. |
| MonoBB           | mg/kg | /          | N.D. |
| DiBB             | mg/kg | /          | N.D. |
| TriBB            | mg/kg | /          | N.D. |
| TetraBB          | mg/kg | /          | N.D. |
| PentaBB          | mg/kg | /          | N.D. |
| HexaBB           | mg/kg | /          | N.D. |
| HeptaBB          | mg/kg | /          | N.D. |
| OctaBB           | mg/kg | /          | N.D. |
| NonaBB           | mg/kg | /          | N.D. |
| DecaBB           | mg/kg | /          | N.D. |
| PBDEs            | mg/kg | 1000       | N.D. |
| MonoBDE          | mg/kg | /          | N.D. |
| DiBDE            | mg/kg | /          | N.D. |
| TriBDE           | mg/kg | /          | N.D. |
| TetraBDE         | mg/kg | /          | N.D. |
| PentaBDE         | mg/kg | /          | N.D. |
| HexaBDE          | mg/kg | /          | N.D. |
| HeptaBDE         | mg/kg | /          | N.D. |
| OctaBDE          | mg/kg | /          | N.D. |
| NonaBDE          | mg/kg | /          | N.D. |
| DecaBDE          | mg/kg | /          | N.D. |

| Item                                                                     | Unit  | Limit    | A    | B    |
|--------------------------------------------------------------------------|-------|----------|------|------|
| PFOA                                                                     | mg/kg | 50       | N.D. | N.D. |
| Perfluorooctane<br>Sulfonates (PFOS)<br>PFOS – Acid<br>PFOS – Metal Salt | mg/kg | See note | N.D. | N.D. |

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| Item            | Unit  | Limit | A    |
|-----------------|-------|-------|------|
| Fluorine (F)    | mg/kg | /     | N.D. |
| Chlorine (Cl)   | mg/kg | 900   | N.D. |
| Bromine (Br)    | mg/kg | 900   | N.D. |
| Iodine (I)      | mg/kg | /     | N.D. |
| Total ( Br+ Cl) | mg/kg | 1500  | N.D. |

| Item           | Unit  | A    |
|----------------|-------|------|
| Antimony (Sb)* | mg/kg | 28.1 |

## Specimen Description:

A: Black plastic

B: Silvery metal

## Note:

- Reference information: Directive 2006/122/EC
- (i) 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.
- (ii) 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  $1\mu\text{g}/\text{m}^2$  of the coated material.
- Specimens, which requested to determine Antimony, Cadmium, Mercury and Lead Content, have been dissolved completely.
- \*Since through mechanical separation, it couldn't thoroughly separate plastic piece from metal. Thus, the Sb in the plastic piece part maybe from metal.
- mg/kg=ppm
- N.D.=not detected(<MQL)
- MQL=Method Quantitation Limit
- Negative=Absence of Cr(VI);
- Positive=Presence of Cr(VI);
- Photo is included

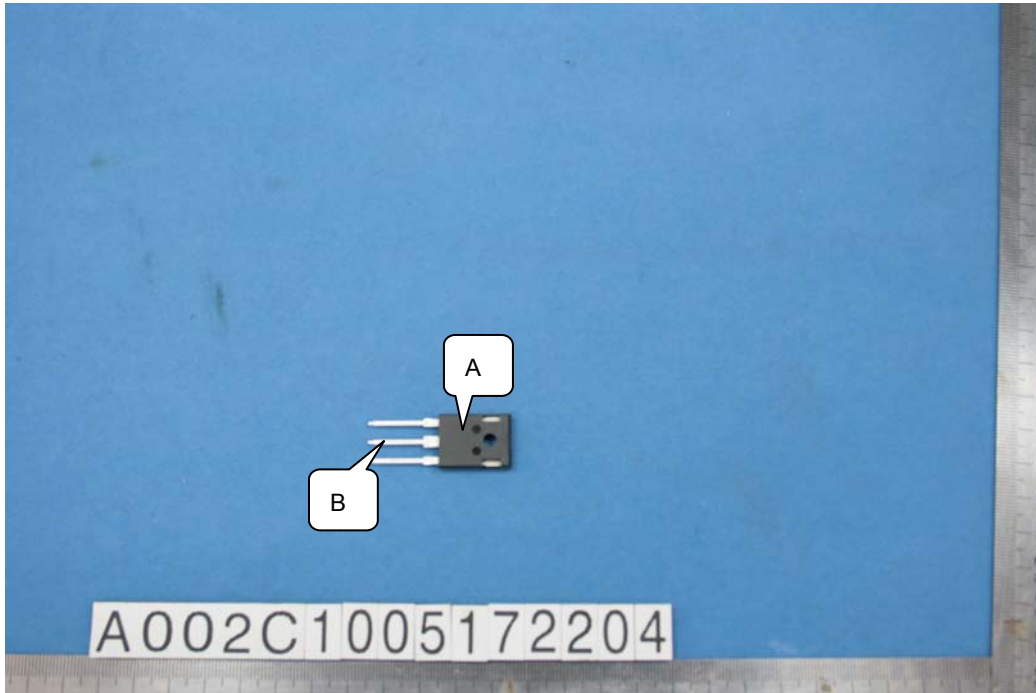
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## Photograph of Sample



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