



**Test Report** No. F690101/LF-CTSAYAA14-30073

Issued Date : 2014. 07. 03

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**SAMWHA ELECTRONICS CO., LTD.**  
215 Gyeonggidong-ro, Namsa-myun Cheoin-gu  
Yongin-si, Gyeonggi-do  
Korea

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

**SGS File No.** : AYAA14-30073  
**Product Name** : FERRITE CORE  
**Item No./Part No.** : Ni-Zn Material  
**Received Date** : 2014. 06. 17  
**Test Period** : 2014. 06. 18 to 2014. 07. 03  
**Test Results** : For further details, please refer to following page(s)

SGS Korea Co., Ltd.

Jeff Jang / Chemical Lab Mgr

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Sample No. : AYAA14-30073.001  
Sample Description : FERRITE CORE  
Item No./Part No. : Ni-Zn Material  
Materials : Ni-Zn Material

## Heavy Metals

| Test Items                  | Unit  | Test Method   | MDL | Results |
|-----------------------------|-------|---|-----|---------|
| Cadmium (Cd)                | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Cadmium by ICP-OES)   | 0.5 | N.D.    |
| Lead (Pb)                   | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Lead by ICP-OES)  | 5   | N.D.    |
| Mercury (Hg)                | mg/kg | With reference to IEC 62321-4:2013<br>(Determination of Mercury by ICP-OES)   | 2   | N.D.    |
| Hexavalent Chromium (Cr VI) | mg/kg | With reference to IEC 62321:2008 (Determination<br>of Hexavalent Chromium by spot test/Colorimetric<br>Method using UV-Vis) | 1   | N.D.    |

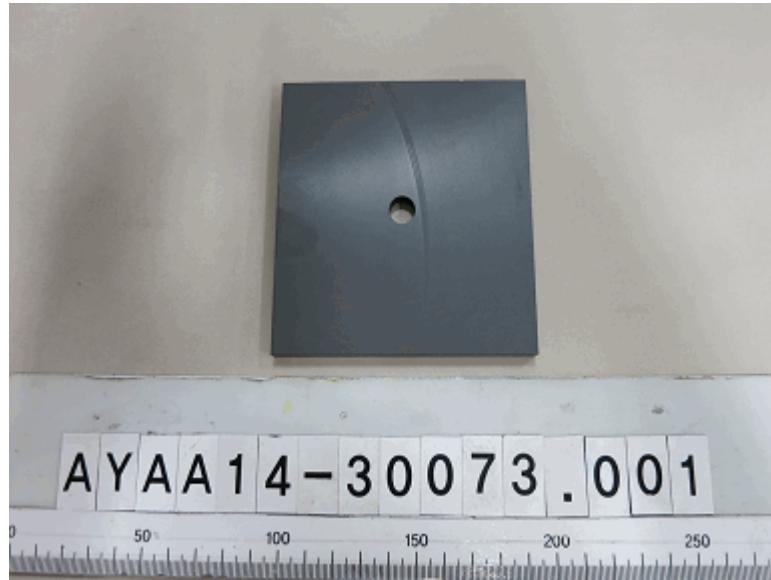
## Halogen Content

| Test Items   | Unit  | Test Method           | MDL | Results |
|--------------|-------|-----------------------|-----|---------|
| Bromine(Br)  | mg/kg | BS EN 14582:2007 , IC | 30  | N.D.    |
| Chlorine(Cl) | mg/kg | BS EN 14582:2007 , IC | 30  | N.D.    |

- NOTE: (1) N.D. = Not detected.(<MDL)  
(2) mg/kg = ppm  
(3) MDL = Method Detection Limit  
(4) - = No regulation  
(5) Negative = Undetectable / Positive = Detectable  
(6) \*\* = Qualitative analysis (No Unit)  
(7) \* = Boiling-water-extraction:  
Negative = Absence of CrVI coating  
Positive = Presence of CrVI coating; 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.

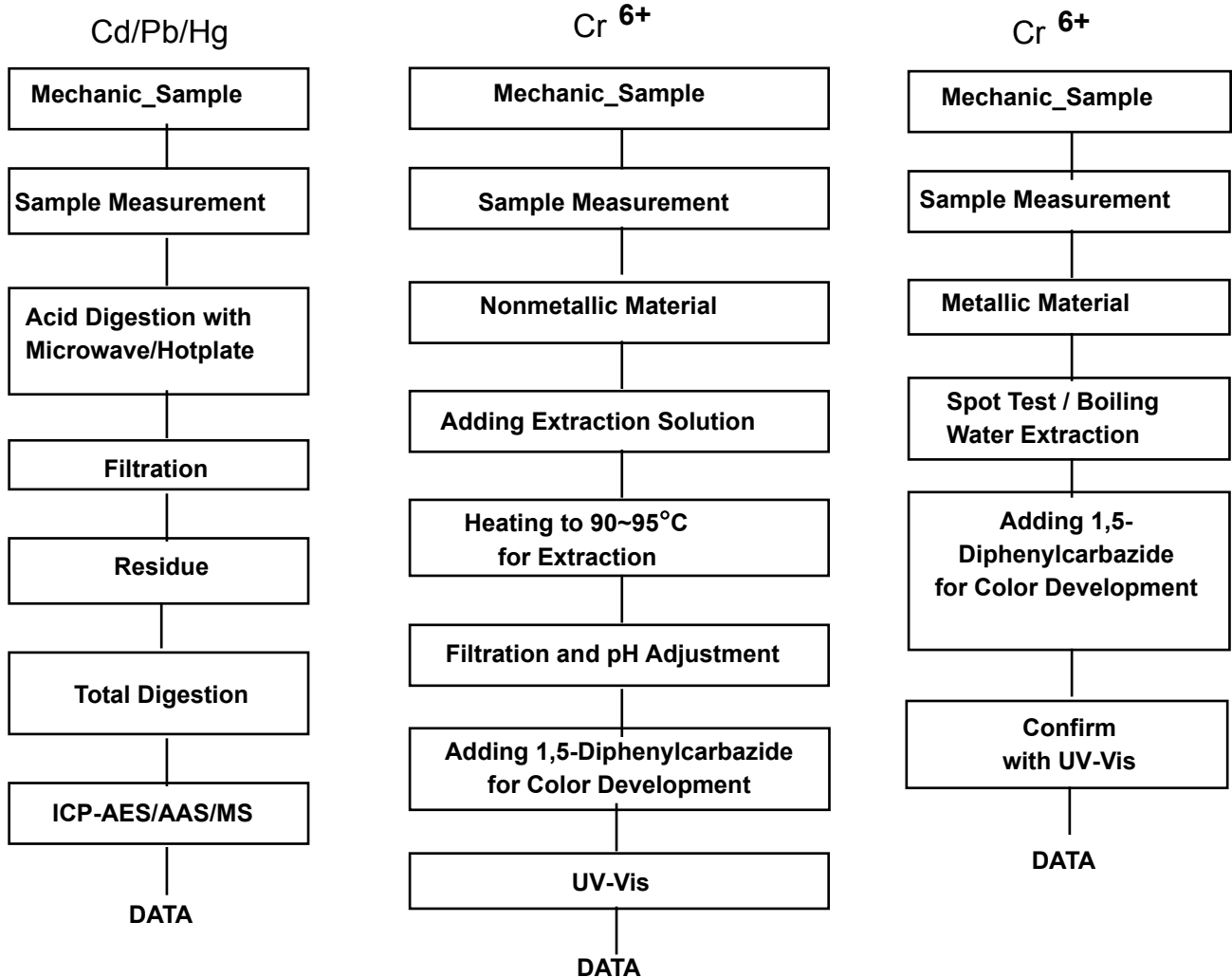
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Picture of Sample as Received:



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**Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr<sup>6+</sup> Testing**

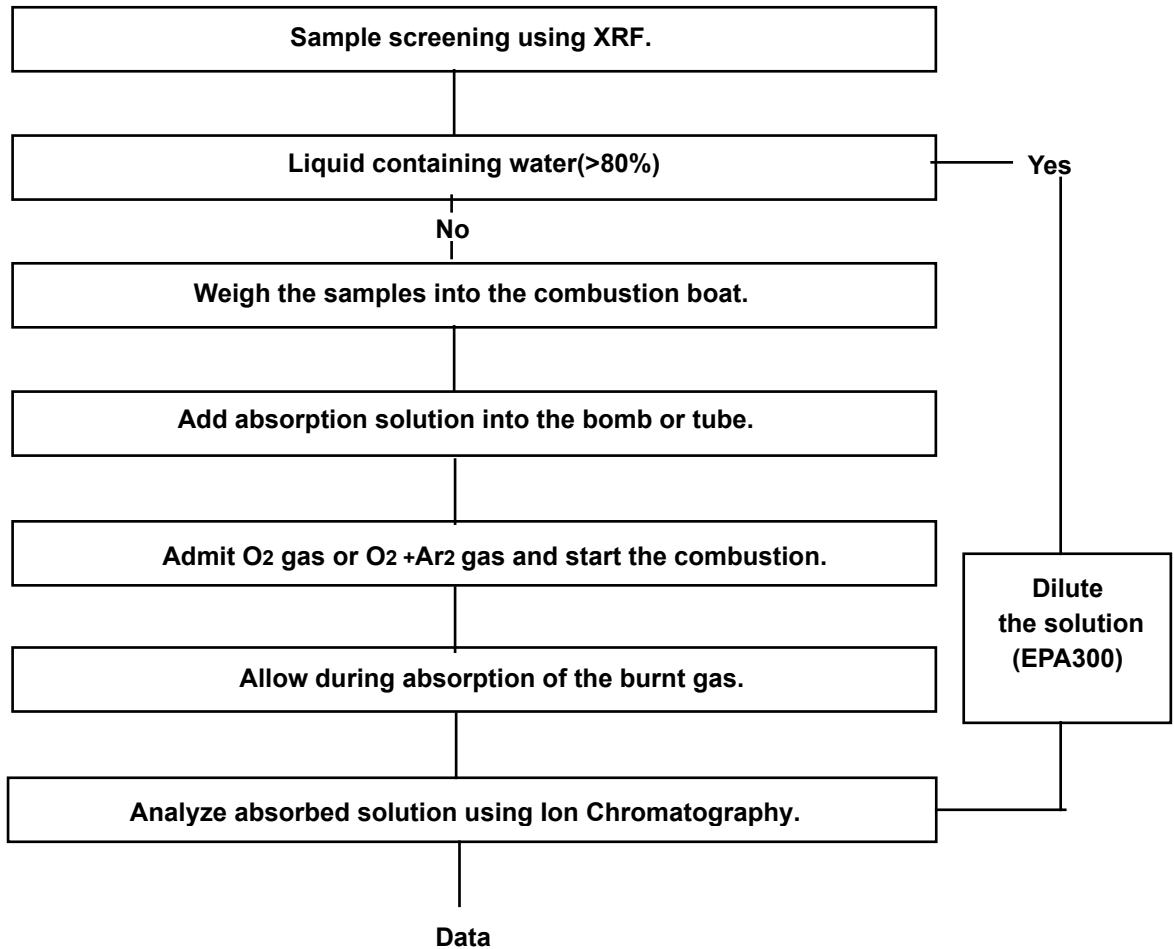


The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.  
 Section Chief : Gilsae Yi

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### Flow Chart for Halogen Test



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

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