



**Test Report** No. F690101/LF-CTSAYAA14-30072

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:-

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**SGS File No.** : AYAA14-30072  
**Product Name** : FERRITE CORE  
**Item No./Part No.** : Mn-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.** : AYAA14-30072.001  
**Sample Description** : FERRITE CORE  
**Item No./Part No.** : Mn-Zn Material  
**Materials** : High Permeability

**Heavy Metals**

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

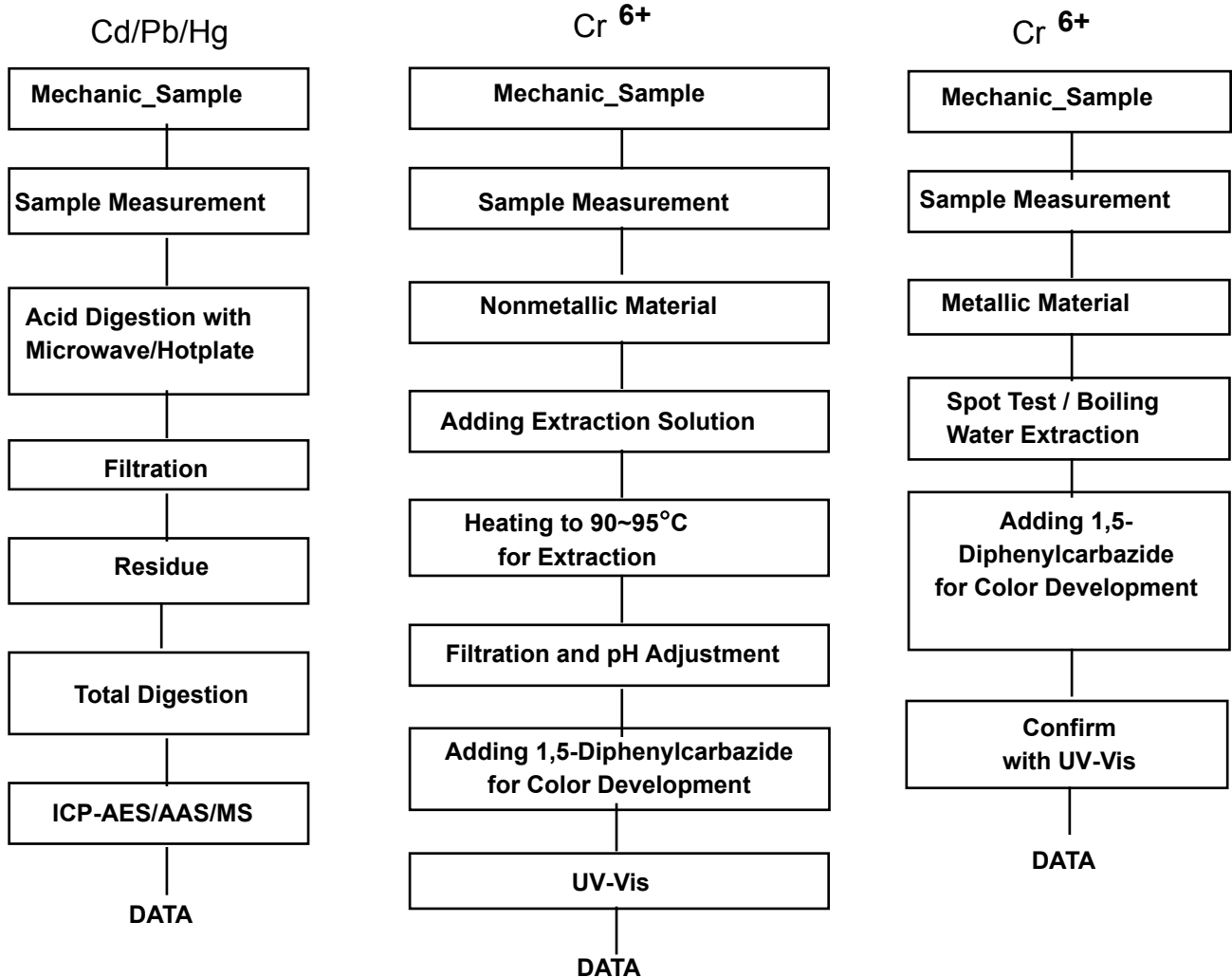
- NOTE:
- (1) N.D. = Not detected.(<MDL)
  - (2) mg/kg = ppm
  - (3) MDL = Method Detection Limit
  - (4) - = No regulation
  - (5) Negative = Undetectable / Positive = Detectable
  - (6) \*\* = Qualitative analysis (No Unit)
  - (7) \* = Boiling-water-extraction:  
 Negative = Absence of CrVI coating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

Picture of Sample as Received:



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

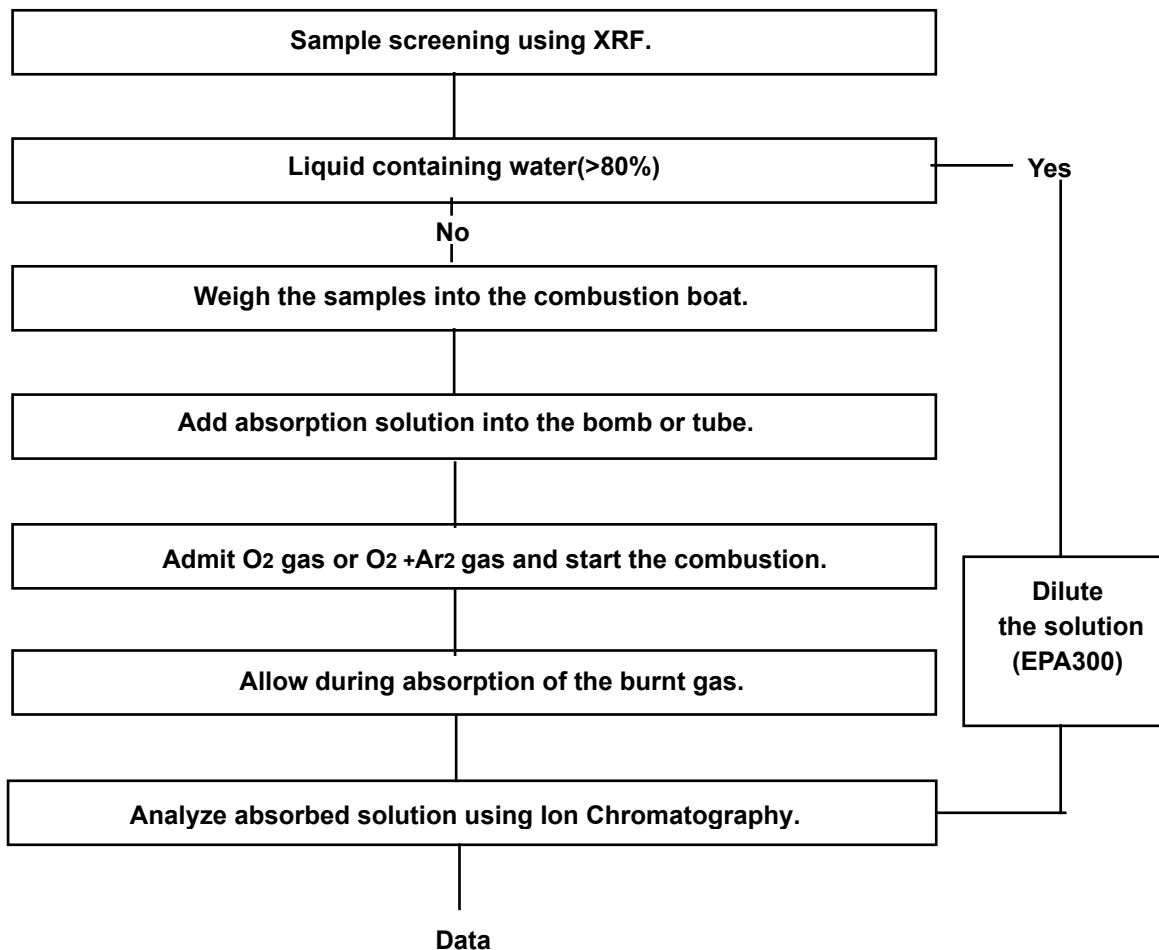


The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.  
 Section Chief : Gilsae Yi

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### Flow Chart for Halogen Test



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

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