



Test Report No. F690101/LF-CTSAYAA15-31922

Issued Date : 2015. 06. 24

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SAMWHA ELECTRONICS CO., LTD.
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Korea

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

SGS File No. : AYAA15-31922
Product Name : FERRITE CORE
Item No./Part No. : Mn-Zn Material
Received Date : 2015. 06. 19
Test Period : 2015. 06. 19 to 2015. 06. 24
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. : AYAA15-31922.001
Sample Description : FERRITE CORE
Item No./Part No. : Mn-Zn Material
Materials : Low Loss Material

Heavy Metals

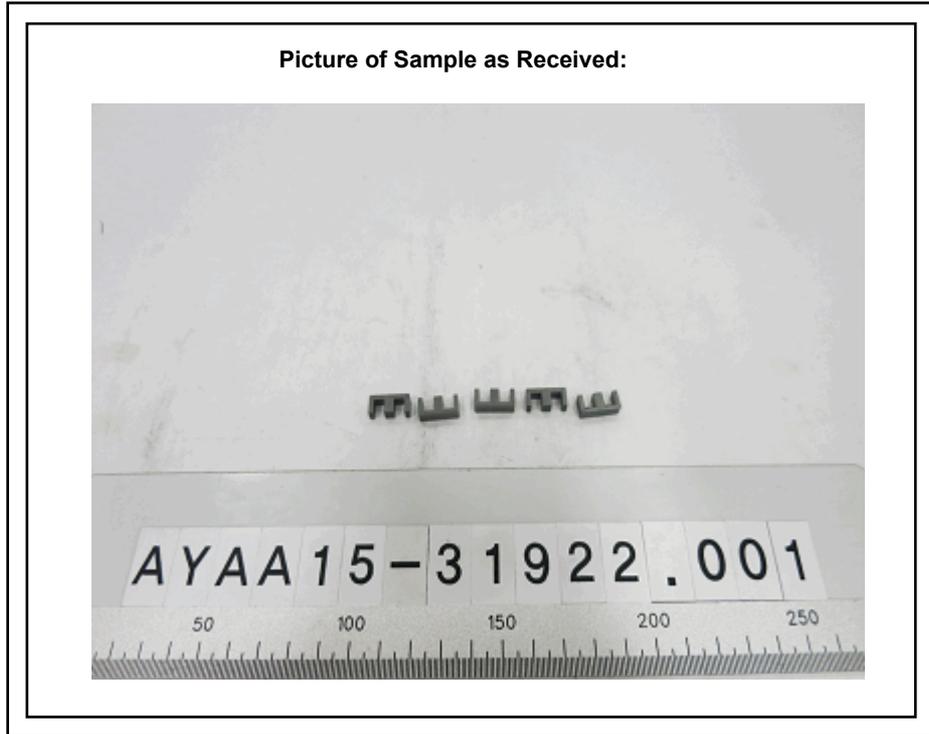
Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cadmium by ICP-OES)	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Lead by ICP-OES)	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Mercury by ICP-OES)	2	N.D.
Hexavalent Chromium (Cr VI) By boiling water extraction*	**	With reference to IEC 62321:2008 (Determination of Hexavalent Chromium by spot test/Colorimetric Method using UV-Vis)	-	Negative
Antimony (Sb)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	10	N.D.

Halogen Content

Test Items	Unit	Test Method	MDL	Results
Bromine(Br)	mg/kg	With reference to EN 14582, IC	30	N.D.
Chlorine(Cl)	mg/kg	With reference to EN 14582, IC	30	N.D.

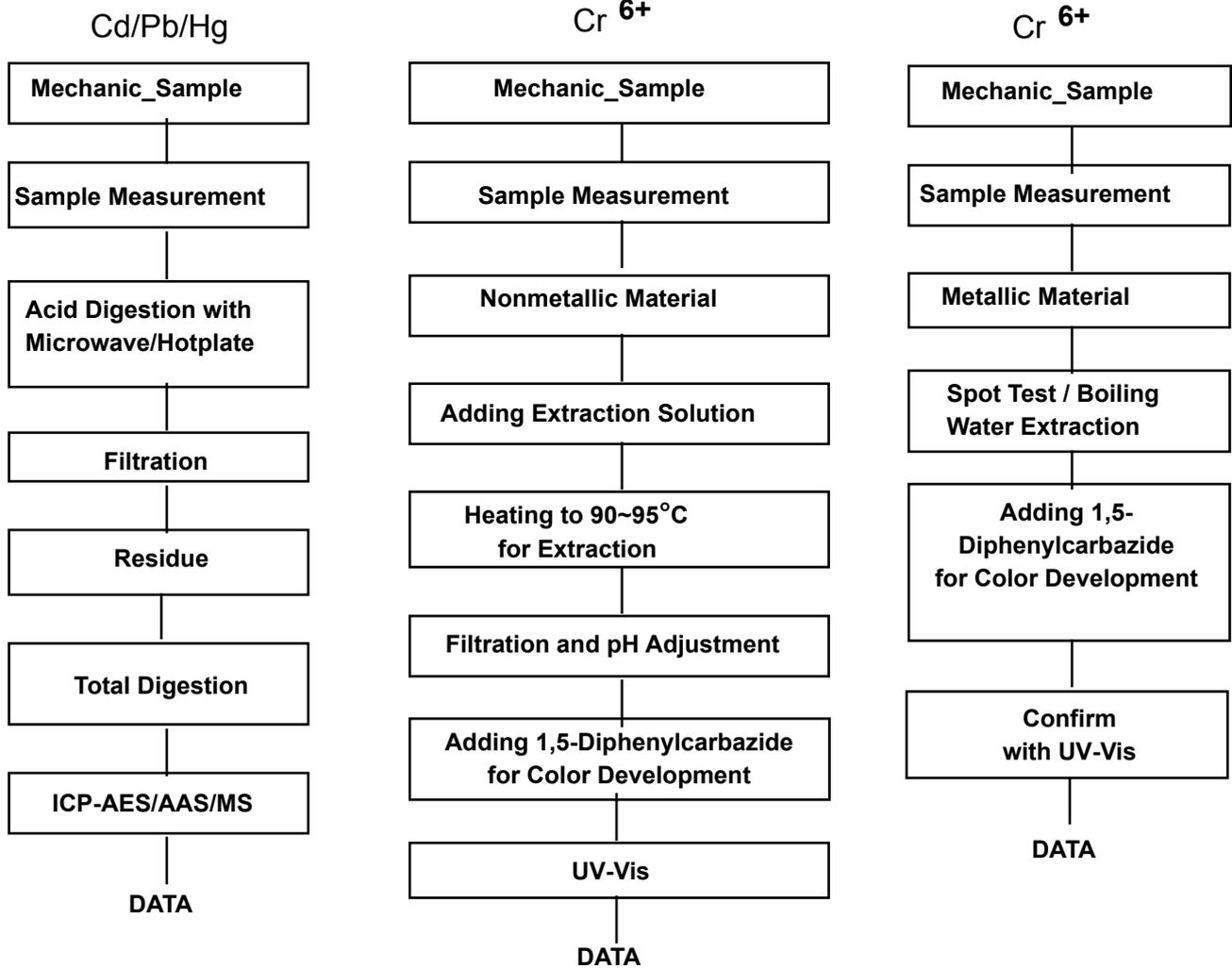
- NOTE:
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) Negative = Undetectable / Positive = Detectable
 - (6) ** = Qualitative analysis (No Unit)
 - (7) * = Boiling-water-extraction:
Negative = Absence of CrVI coating
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

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Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr⁶⁺ Testing



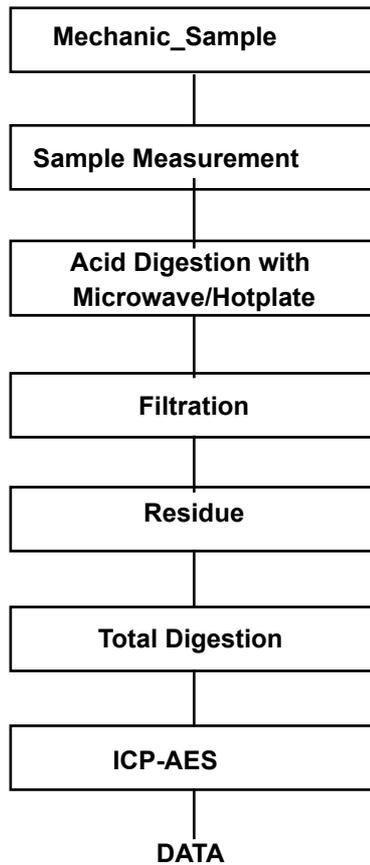
The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.
 Section Chief : Gilsae Yi

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Flow Chart for Inorganic Elements Testing

Inorganic Elements

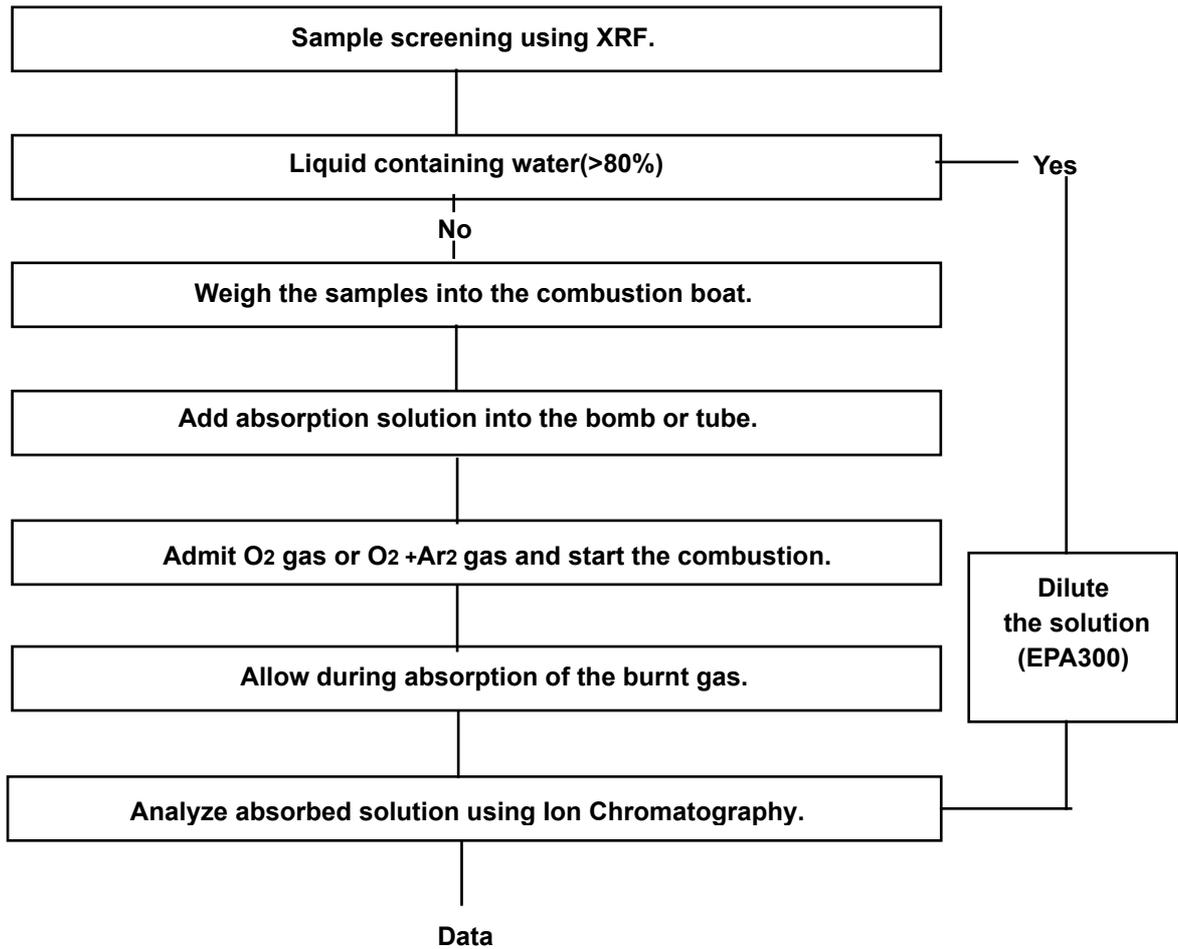


Major Inorganic Heavy Metals	Antimony(Sb) , Beryllium(Be) , Phosphorus(P) , Arsenic(As) etc.
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Flow Chart for Halogen Test



*** End of Report ***

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