

Test Report No. F690101/LF-CTSAYAA14-52151

Issued Date : 2018. 06. 21

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DAE HA CO., LTD.
9F, 10F Daeha BLDG.
499, Gangseo-ro, Gangseo-gu
Seoul 07523
Korea

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

SGS File No. : AYAA14-52151
Product Name : HOLOGRAPHICS
Item No./Part No. : N/A
Received Date : 2018. 06. 14
Test Period : 2018. 06. 15 to 2018. 06. 21
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. : AYAA14-52151.001

Sample Description : HOLOGRAPHICS

Item No./Part No. : N/A

Materials : PET Film

Heavy Metals

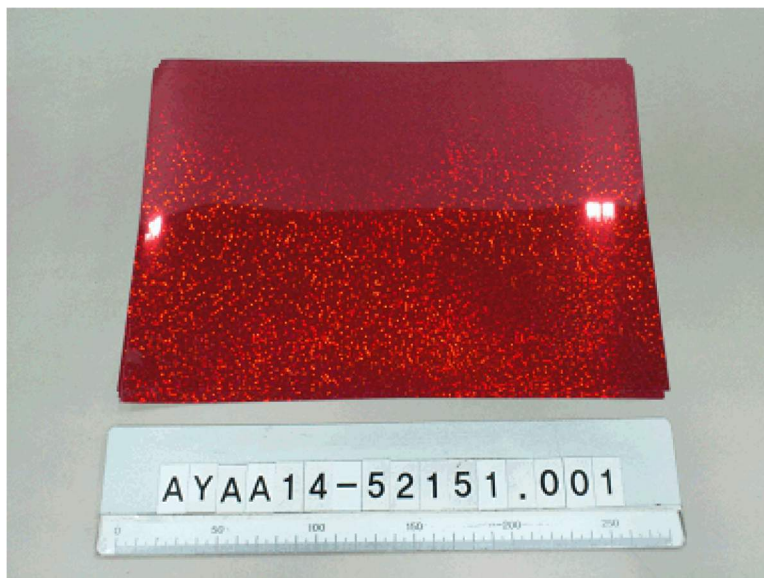
Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cadmium by ICP-OES)	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Lead by ICP-OES)	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination 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.
Arsenic (As)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	10	N.D.
Nickel (Ni)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	1	N.D.

Phthalates

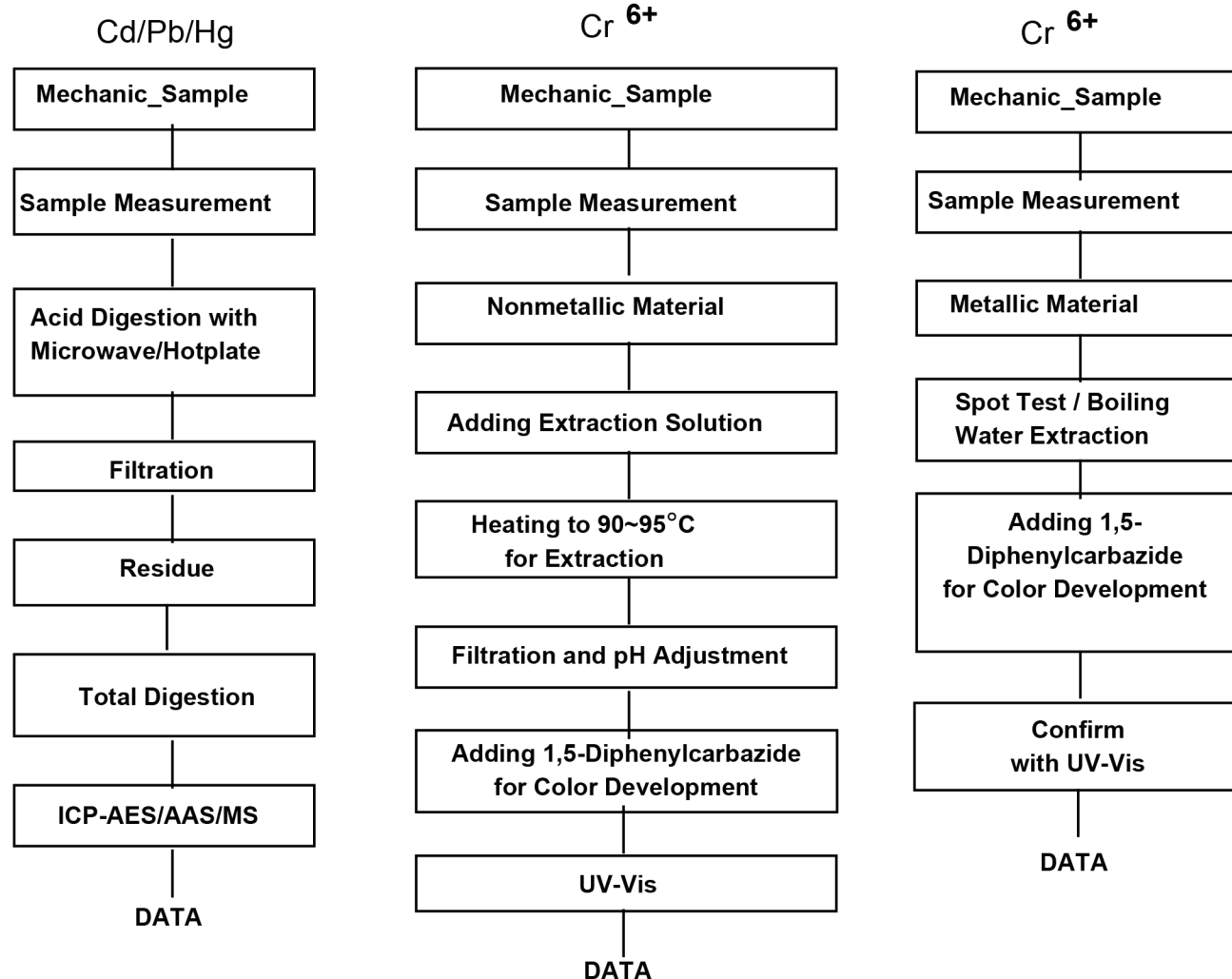
Test Items	Unit	Test Method	MDL	Results
Di-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Dibutyl phthalate (DBP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Benzyl butyl phthalate (BBP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-n-octyl phthalate (DNOP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-isooctyl phthalate (DIOP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-isononyl phthalate (DINP)	mg/kg	With reference to EPA 8061A , GC/MS	50	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.

Picture of Sample as Received:



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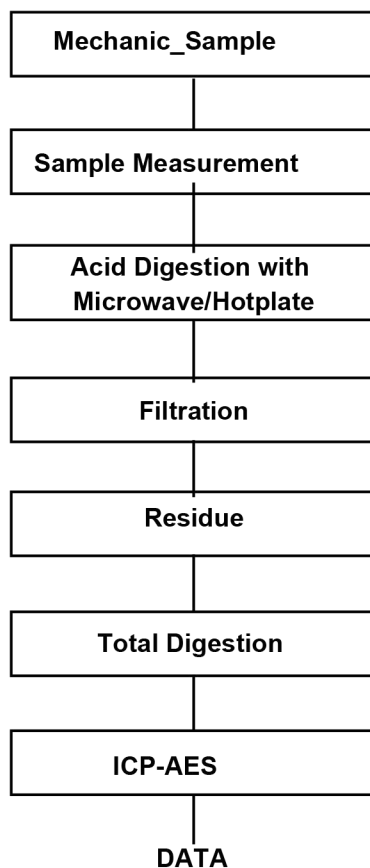
Testing Flow Chart for RoHS: Cd/Pb/Hg/Cr⁶⁺ Testing

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

Section Chief : Gilsae Yi

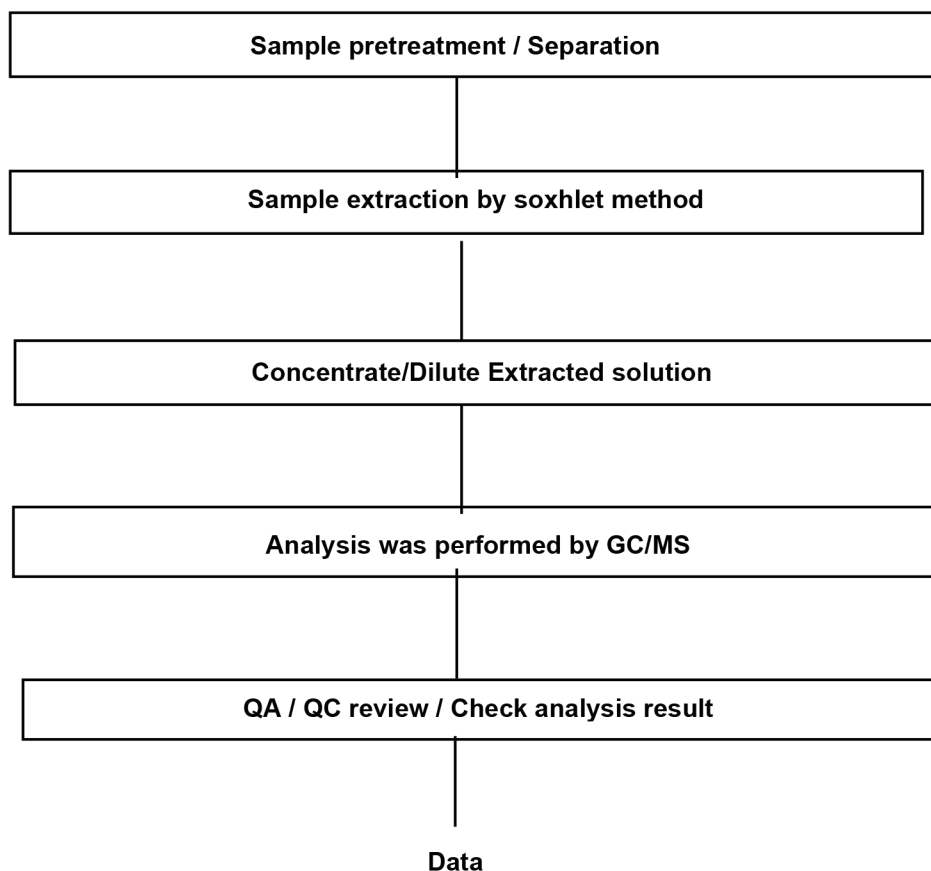
Flow Chart for Inorganic Elements Testing

Inorganic Elements



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



*** End of Report ***