



Test Report No. F690101/LF-CTSAYAA14-02332

Issued Date : 2014. 01. 14

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Y.M.T. CO., LTD.

91BL-11L Namdong Complex #670-10, Gojan-dong
Namdong-gu, Incheon
Korea

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

SGS File No. : AYAA14-02332
Product Name : Carcoat
Item No./Part No. : N/A
Received Date : 2014. 01. 10
Test Period : 2014. 01. 13 to 2014. 01. 14
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.

Jeff Jang / Chemical Lab Mgr

The results shown in this test report refer only to the sample(s) submitted by the client, not cover the quality of the whole batch. This report should be used as intended, and shall not be used for advertisement and lawsuit.

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Sample No. : AYAA14-02332.001

Sample Description : Carot

Item No./Part No. : N/A

Materials : N/A

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Antimony (Sb)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	10	N.D.
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2013, ICP	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321:2013, ICP	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321:2013, ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	With reference to IEC 62321:2008, UV-VIS	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.

Phthalates

Test Items	Unit	Test Method	MDL	Results
Diisobutyl Phthalate (DIBP)	mg/kg	With reference to ASTM D3421-75, GC-MS	50	N.D.
Di-n-octyl phthalate (DNOP)	mg/kg	With reference to ASTM D3421-75, GC-MS	50	N.D.
Diisononyl phthalate (DINP)	mg/kg	With reference to ASTM D3421-75, GC-MS	50	N.D.

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Sample No. : AYAA14-02332.001
Sample Description : Carcoat
Item No./Part No. : N/A
Materials : N/A

Phthalates

Test Items	Unit	Test Method	MDL	Results
Diisodecyl phthalate (DIDP)	mg/kg	With reference to ASTM D3421-75 , GC-MS	50	N.D.
Butylbenzyl phthalate (BBP)	mg/kg	With reference to ASTM D3421-75 , GC-MS	50	N.D.
Dibutyl phthalate (DBP)	mg/kg	With reference to ASTM D3421-75 , GC-MS	50	N.D.
Di-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to ASTM D3421-75 , GC-MS	50	N.D.

Halogen Contents

Test Items	Unit	Test Method	MDL	Results
Bromide (Br-)	mg/L	US EPA300.0, IC	30	N.D.
Chloride (Cl-)	mg/L	US EPA300.0, IC	30	N.D.
Fluoride (F-)	mg/L	US EPA300.0, IC	30	N.D.
Iodide (I-)	mg/L	US EPA300.0, IC	50	N.D.

Flame Retardants

Test Items	Unit	Test Method	MDL	Results
Hexabromocyclododecane (HBCDD)	mg/kg	USEPA 3540C, LC/MS	5	N.D.

Other(s)

Test Items	Unit	Test Method	MDL	Results
PFOA (Perfluorooctanoic acid)	mg/kg	US EPA 3540C/3550C, LC/MS	1	N.D.
PFOS (Perfluorooctane Sulfonates-Acid/Metal Salt/Amide)	mg/kg	US EPA 3540C/3550C, LC/MS	1	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.

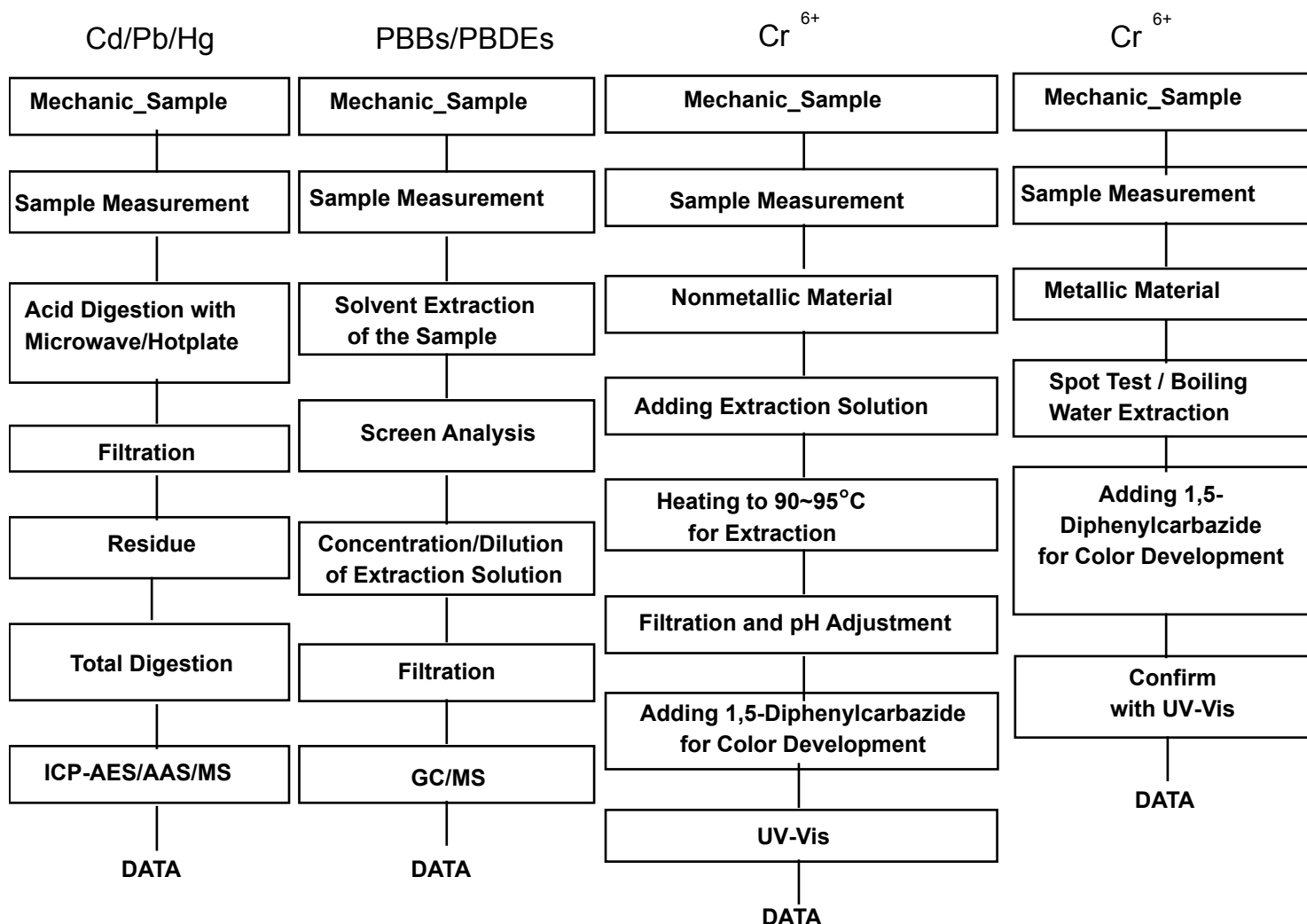
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Picture of Sample as Received:





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

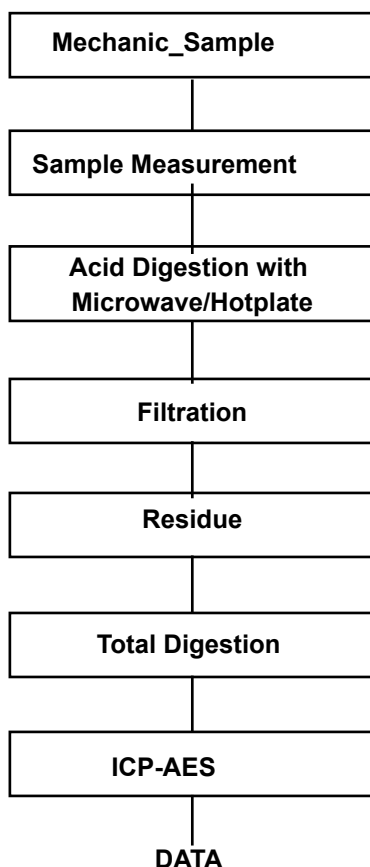


The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.
Section Chief : Gilsae Yi



Flow Chart for Inorganic Elements Testing

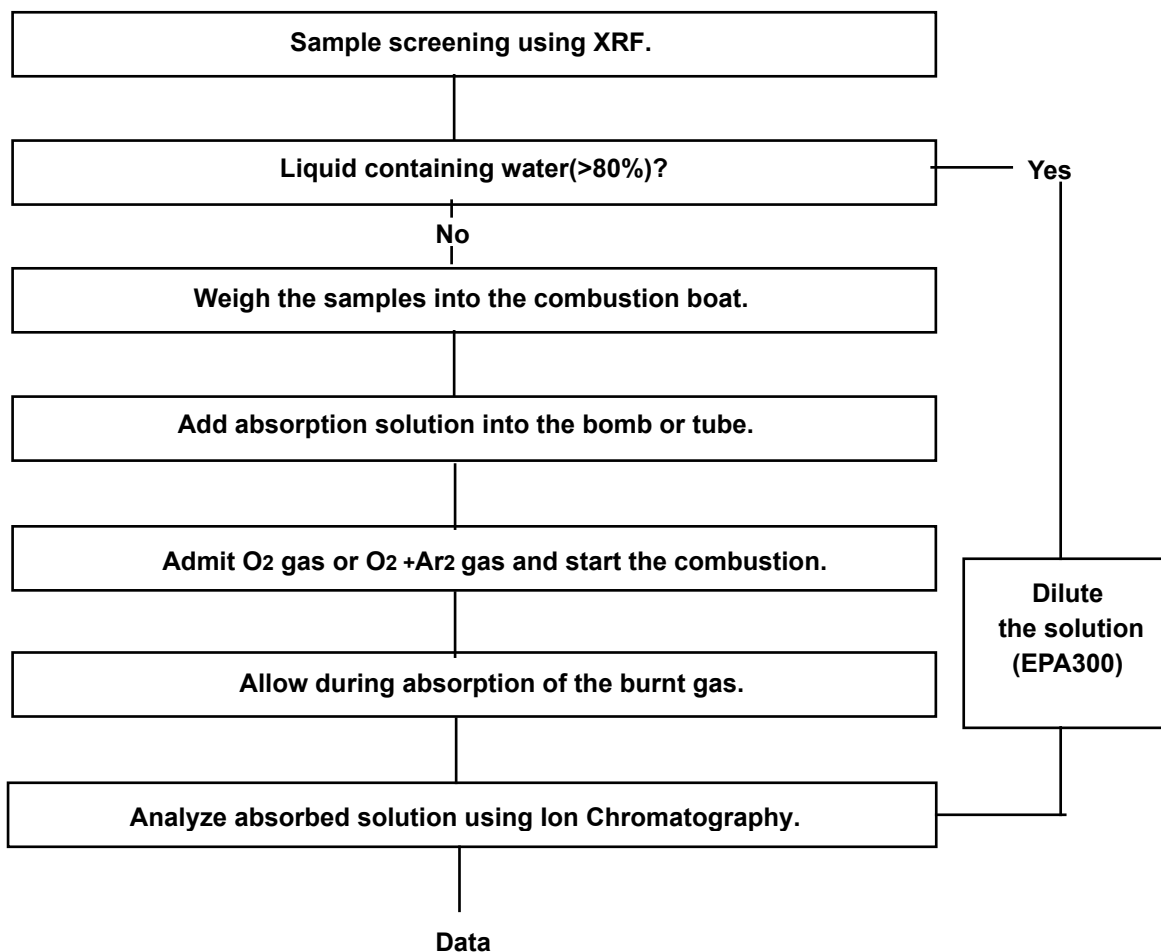
Inorganic Elements



Major Inorganic Heavy Metals	Antimony(Sb) , Beryllium(Be) , Phosphorus(P) , Arsenic(As) etc.
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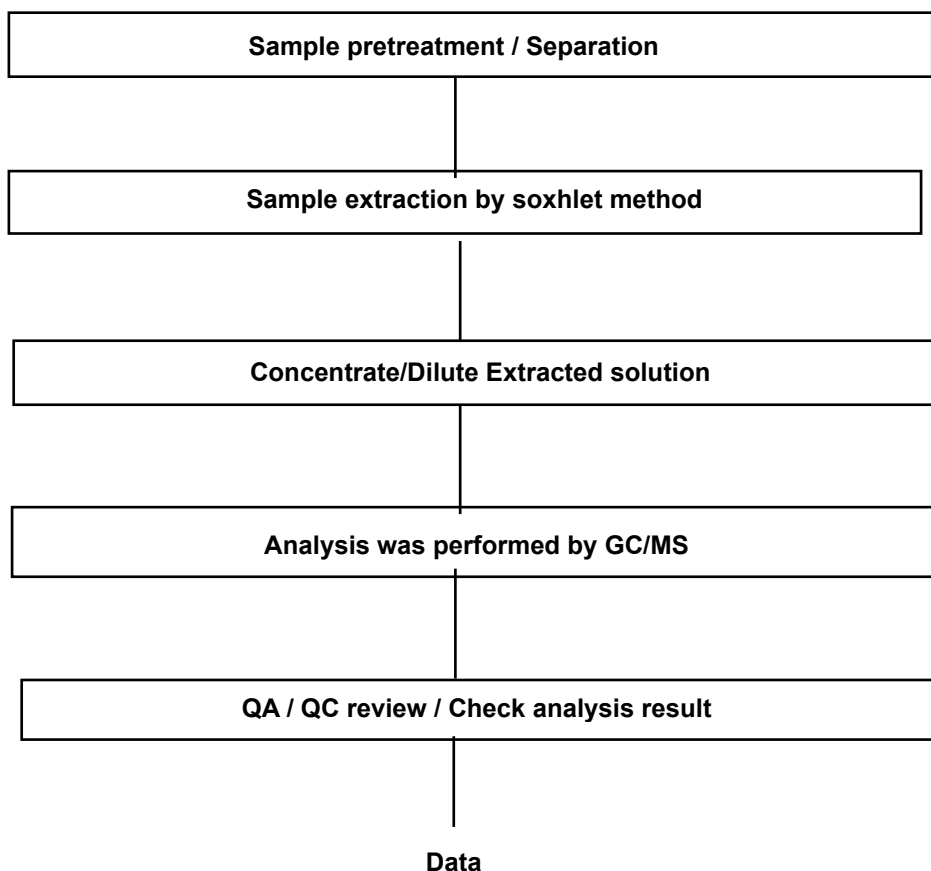


Flow Chart for Halogen Test



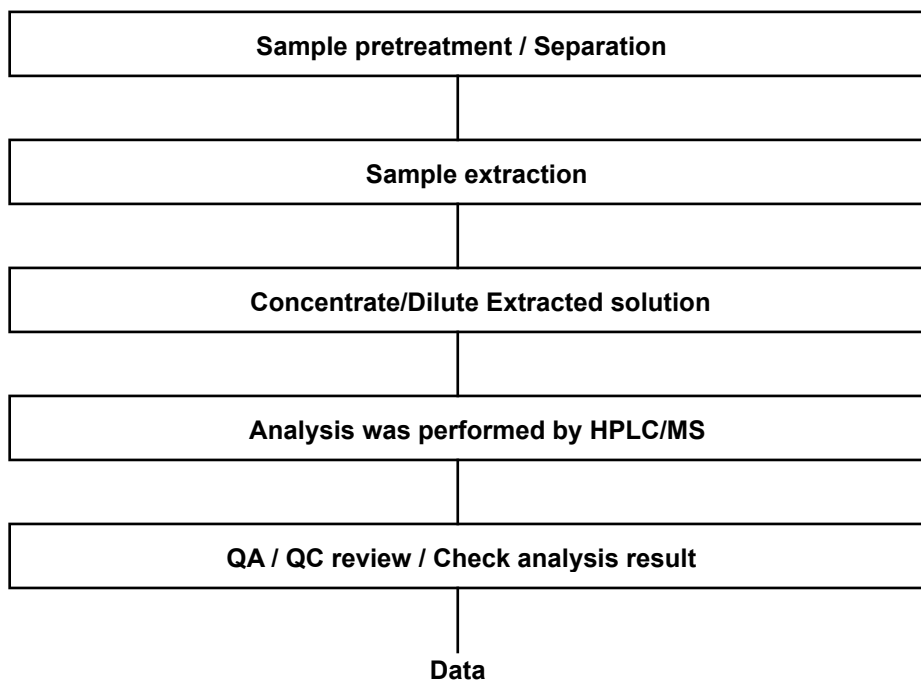


Flow Chart for Phthalate Test



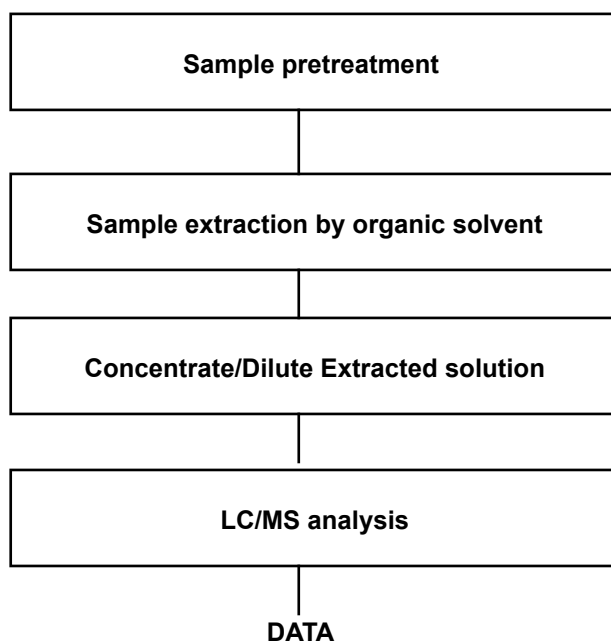


Flow Chart for PFOS/PFOA Test





Testing Flow Chart for HBCD



*** End of Report ***