



Test Report No. F690101/LF-CTSAYGU16-01599

Issued Date : 2016. 02. 24

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POSCO
POSCO CENTER 440, Teheran-ro
Gangnam-gu, Seoul
Korea

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

SGS File No. : AYGU16-01599
Product Name : POSCO STS CR 300
Item No./Part No. : N/A
Received Date : 2016. 02. 16
Test Period : 2016. 02. 16 to 2016. 02. 24
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.
/ Gimhae Laboratory

Thomas Hwang / Lab Manager

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Sample No. : AYGU16-01599.001
 Sample Description : POSCO STS CR 300
 Item No./Part No. : N/A
 Materials : N/A

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) *	µg/cm ²	With reference to IEC 62321-7-1:2015 (Determination of CrVI by UV-Vis)	0.1	N.D.
Antimony (Sb)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	10	N.D.
Beryllium (Be)	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.

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Sample No. : AYGU16-01599.001
 Sample Description : POSCO STS CR 300
 Item No./Part No. : N/A
 Materials : N/A

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBBs and PBDEs by GC-MS)	5	N.D.

Phthalates

Test Items	Unit	Test Method	MDL	Results
Di(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.
Butyl Benzyl Phthalate (BBP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.

Halogen Contents

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

PFCs

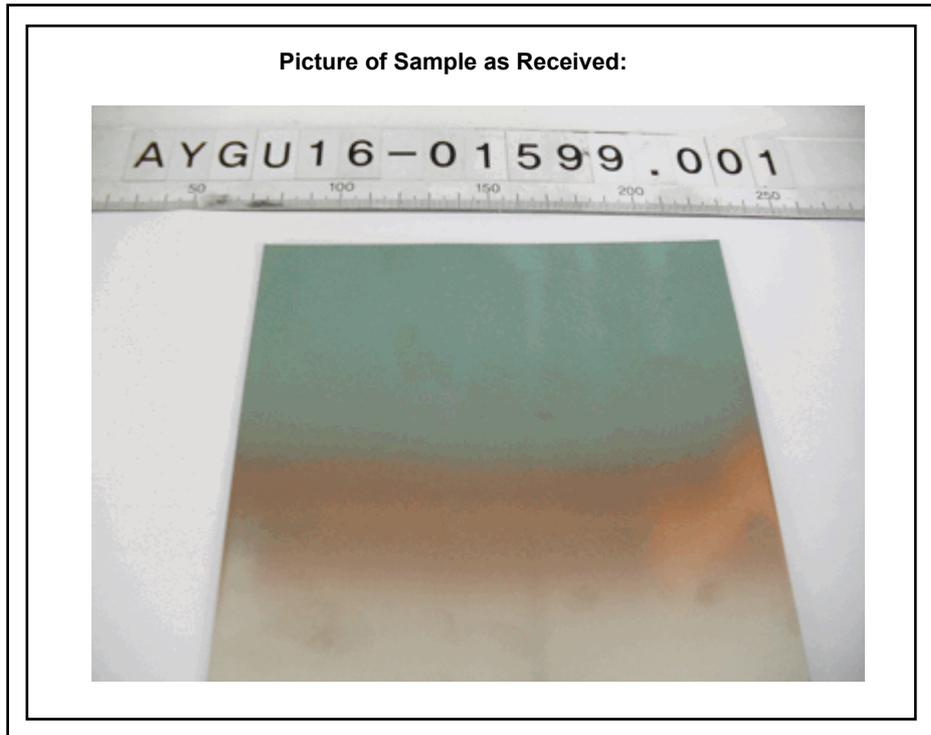
Test Items	Unit	Test Method	MDL	Results
Perfluorootanoic acid (PFOA)	mg/kg	CEN/TS 15968 : 2010, HPLC/MS	1	N.D.
PFOS [^]	mg/kg	CEN/TS 15968 : 2010, HPLC/MS	1	N.D.

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Item No./Part No. : N/A
Materials : N/A

^ PFOS refer to Perfluorooctanesulfonic acid and its derivatives including Perfluorooctanesulfonic acid, Perfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamide, N-Ethylperfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamidoethanol and N-Ethylperfluorooctane sulfonamidoethanol

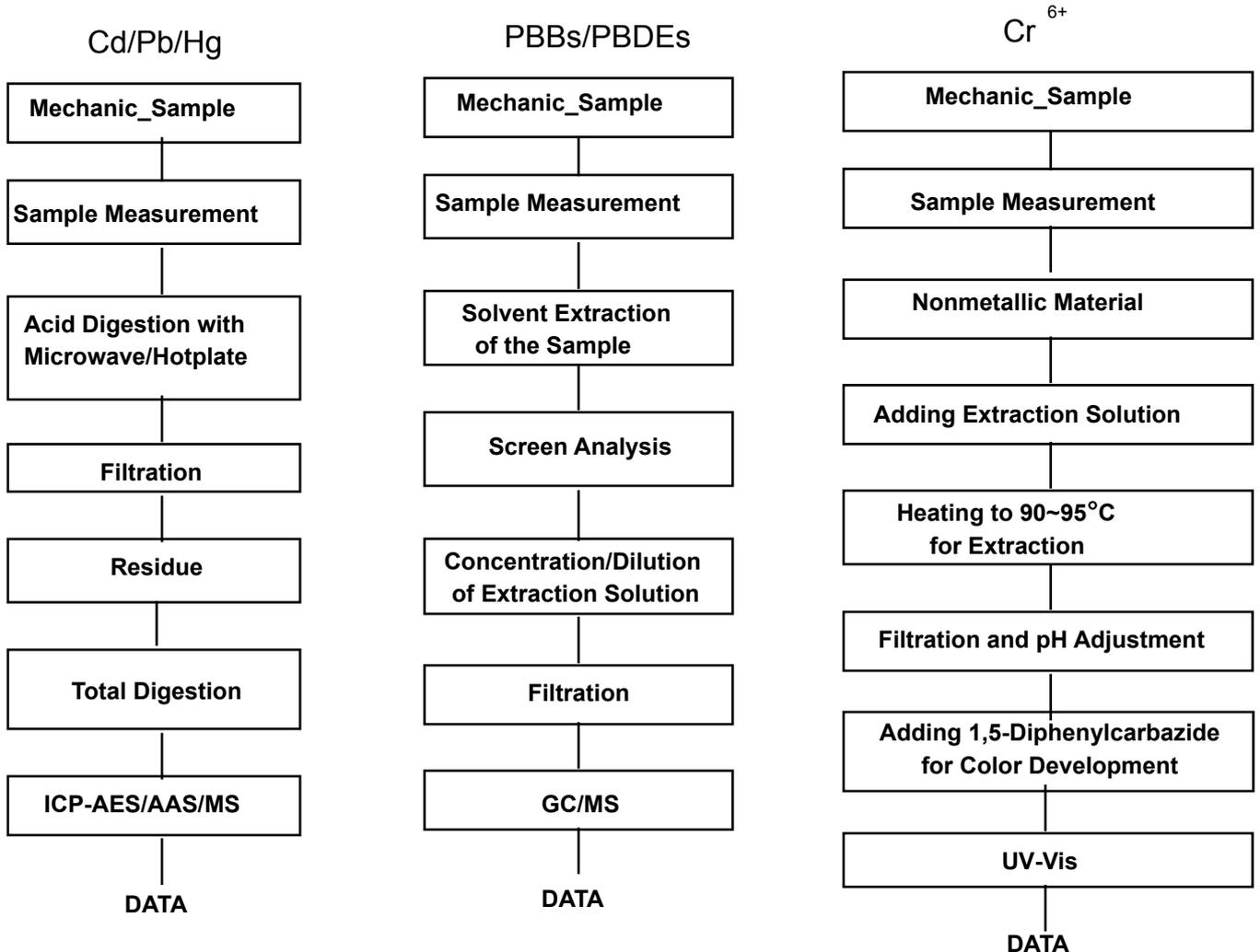
- NOTE:
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) Negative = Undetectable / Positive = Detectable
 - (6) ** = Qualitative analysis (No Unit)
 - (7) * = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 ug/cm². The sample coating is considered to contain CrVI.
 b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 ug/cm²). The coating is considered a non-CrVI based coating.
 c. The result between 0.10 ug/cm² and 0.13 ug/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.



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

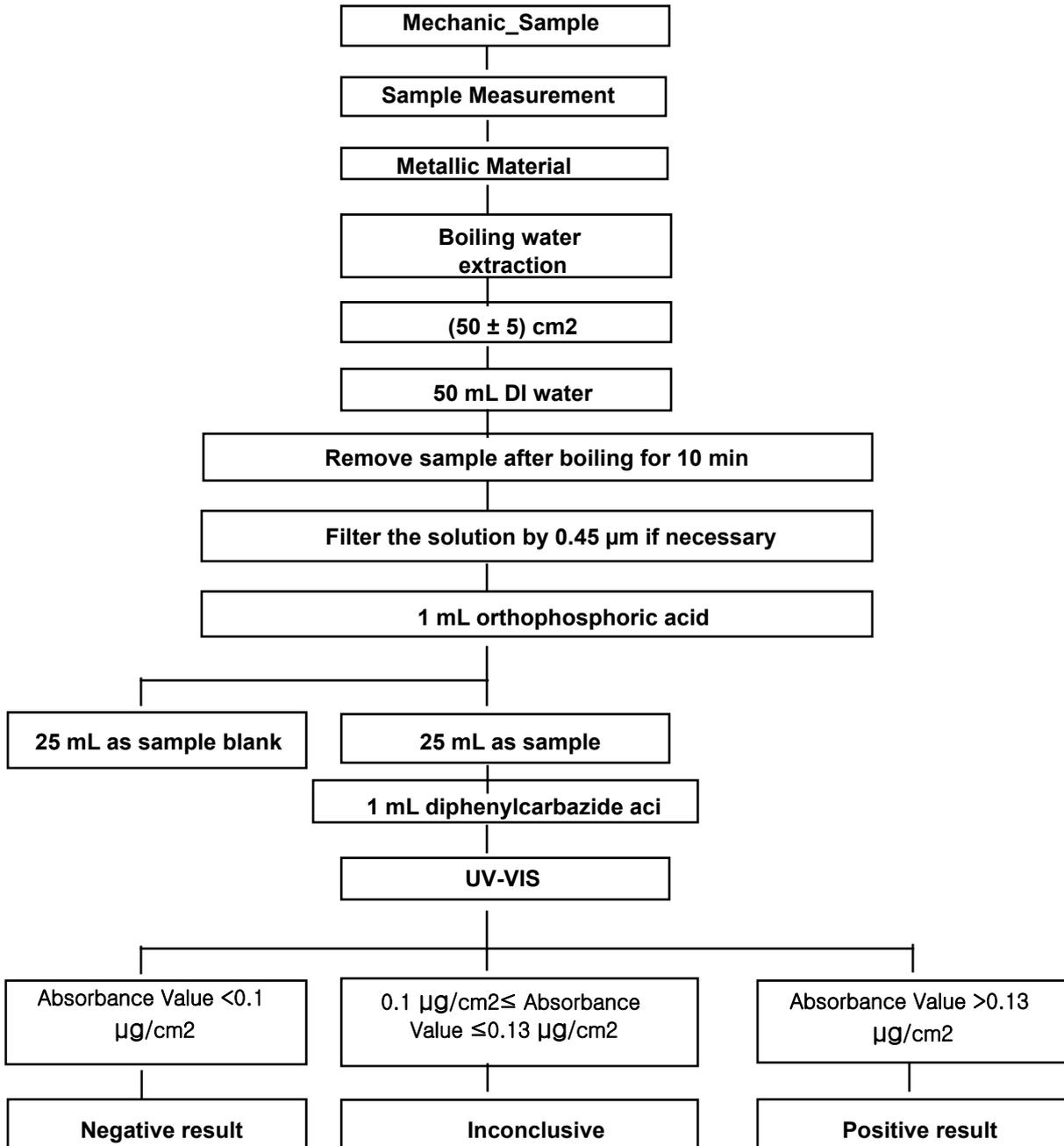


The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.
Section Chief : Sharpless Park

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Cr⁶⁺

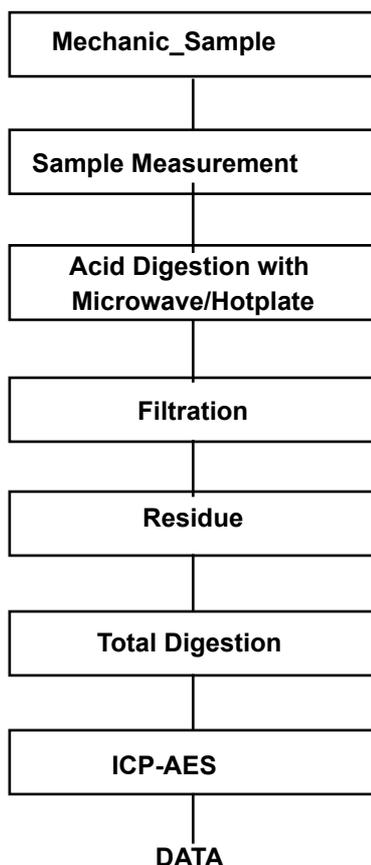


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Flow Chart for Inorganic Elements Testing

Inorganic Elements

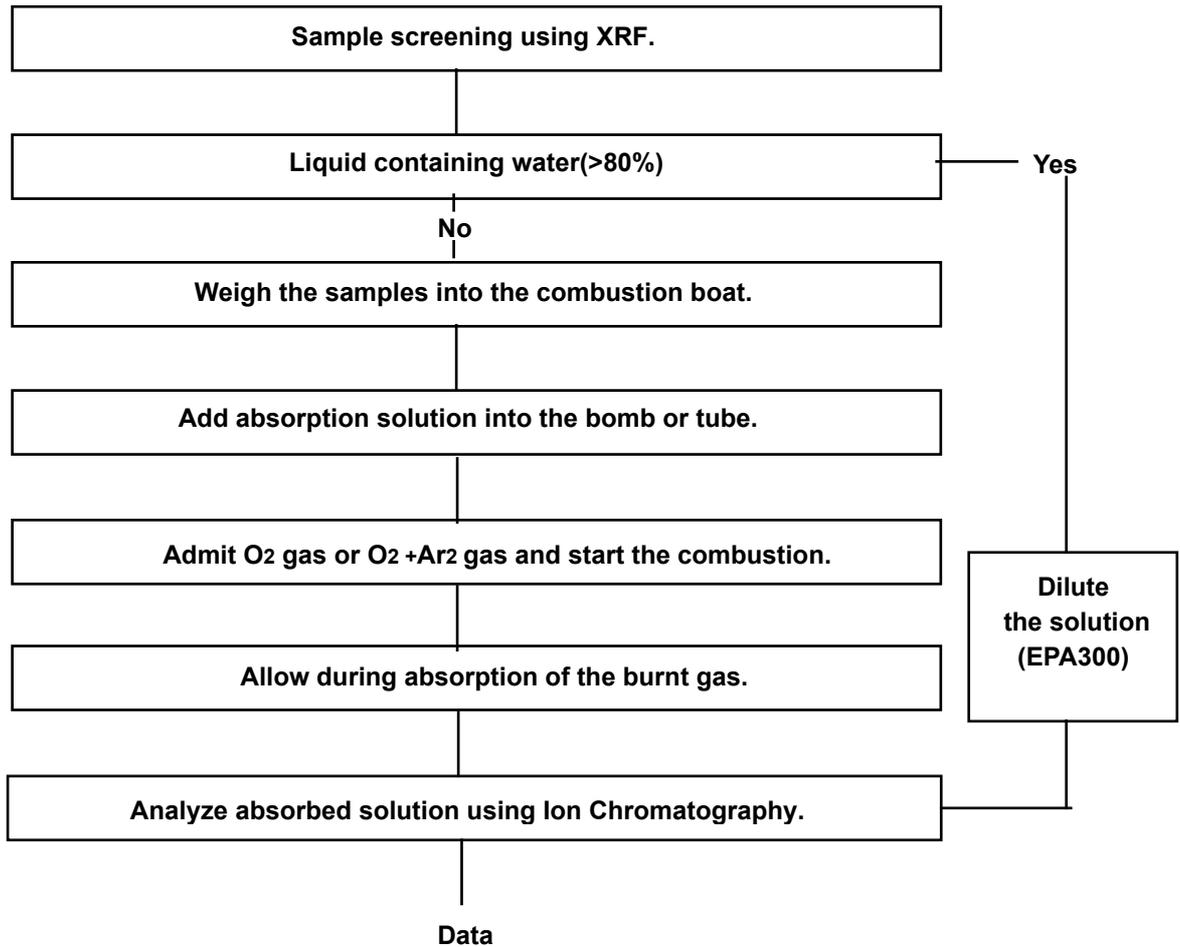


Major Inorganic Heavy Metals	Antimony(Sb) , Beryllium(Be) , Phosphorus(P) , Arsenic(As) etc.
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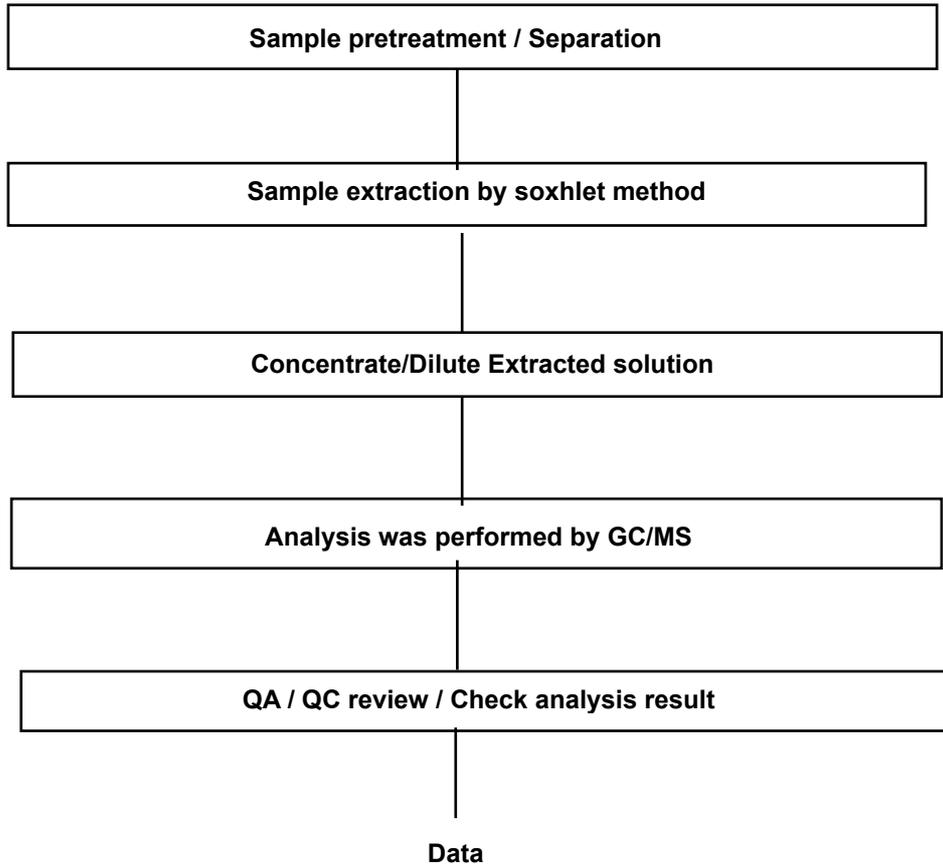
Flow Chart for Halogen Test



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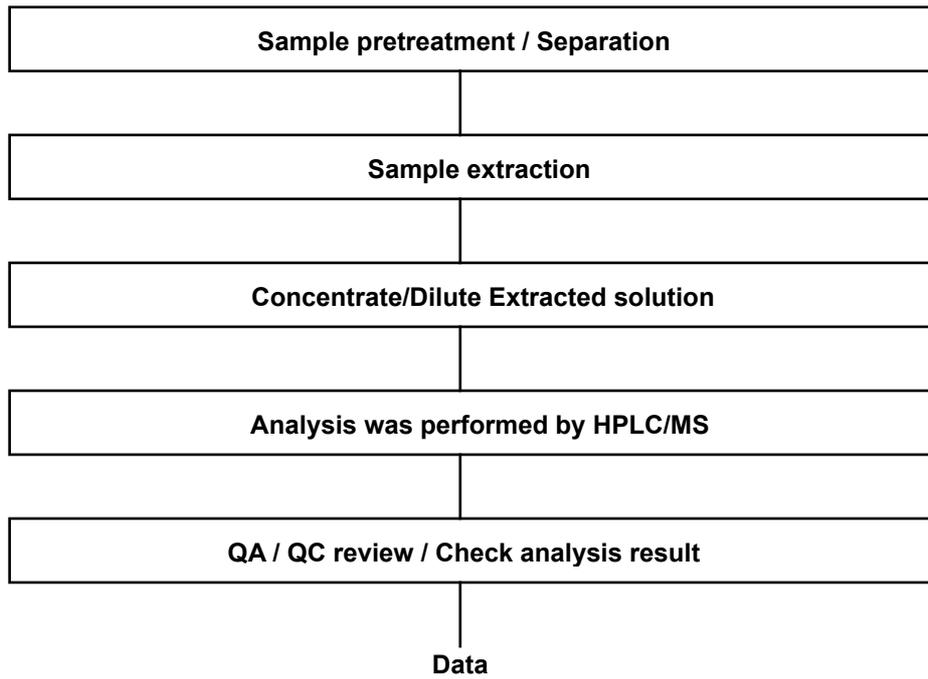
Flow Chart for Phthalate Test



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Flow Chart for PFOS/PFOA Test



*** End of Report ***

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