



Test Report No. F690101/LF-CTSAYAA16-03573

Issued Date : 2016. 01. 21

Page 1 of 7

LG CHEMICAL LTD

55, Yeosusandan 2-ro
Yeosu-si, Jeonnam
Korea

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

SGS File No. : AYAA16-03573
Product Name : TR557
Item No./Part No. : N/A
Received Date : 2016. 01. 18
Test Period : 2016. 01. 18 to 2016. 01. 21
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.

Jeff Jang / Chemical Lab Mgr

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm <http://www.sgs.com/terms_e-document.htm>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

SGS Korea Co., Ltd.

322, The O valley, 76, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080
t +82 (0)31 4608 000 f +82 (0)31 4608 059 <http://www.sgsgroup.kr>



Test Report No. F690101/LF-CTSAYAA16-03573

Issued Date : 2016. 01. 21

Page 2 of 7

Sample No. : AYAA16-03573.001
Sample Description : TR557
Item No./Part No. : N/A
Materials : MABS

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.

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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm http://www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

SGS Korea Co., Ltd.

322, The O valley, 76, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080
t +82 (0)31 4608 000 f +82 (0)31 4608 059 <http://www.sgsgroup.kr>



Test Report No. F690101/LF-CTSAYAA16-03573

Issued Date : 2016. 01. 21

Page 3 of 7

Sample No. : AYAA16-03573.001
Sample Description : TR557
Item No./Part No. : N/A
Materials : MABS

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-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-butyl 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-isodecyl phthalate (DIDP)	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.
Di-n-octyl phthalate (DNOP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-ethyl phthalate(DEP)	mg/kg	With reference to EPA 8061A , GC/MS	50	N.D.
Di-methyl phthalate (DMP)	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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm http://www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

SGS Korea Co.,Ltd.

322, The O valley, 76, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080
t +82 (0)31 4608 000 f +82 (0)31 4608 059 <http://www.sgsgroup.kr>



Test Report No. F690101/LF-CTSAYAA16-03573

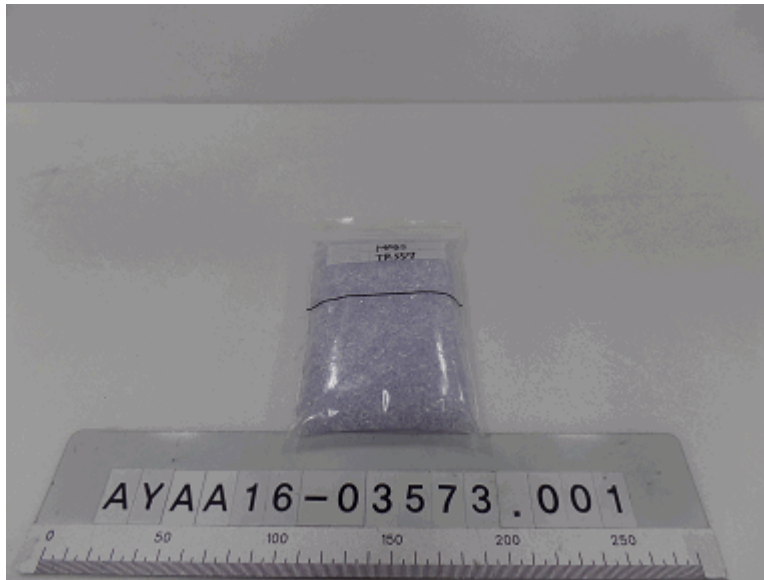
Issued Date : 2016. 01. 21

Page 4 of 7

Sample No. : AYAA16-03573.001
Sample Description : TR557
Item No./Part No. : N/A
Materials : MABS

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/cm^2 . 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/cm^2). The coating is considered a non-CrVI based coating.
c. The result between 0.10 ug/cm^2 and 0.13 ug/cm^2 is considered to be inconclusive - unavoidable coating variations may influence the determination.

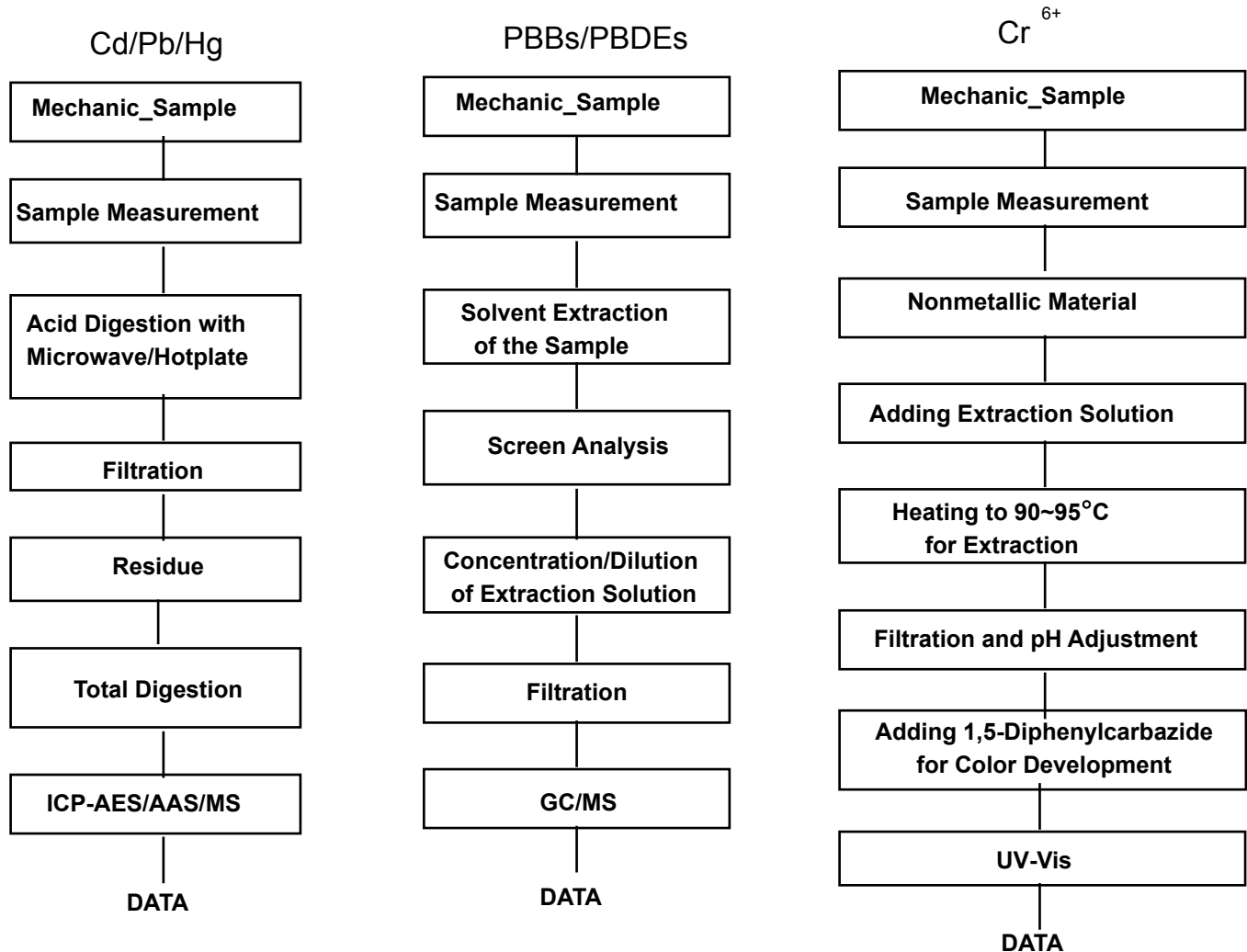
Picture of Sample as Received:



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm http://www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).



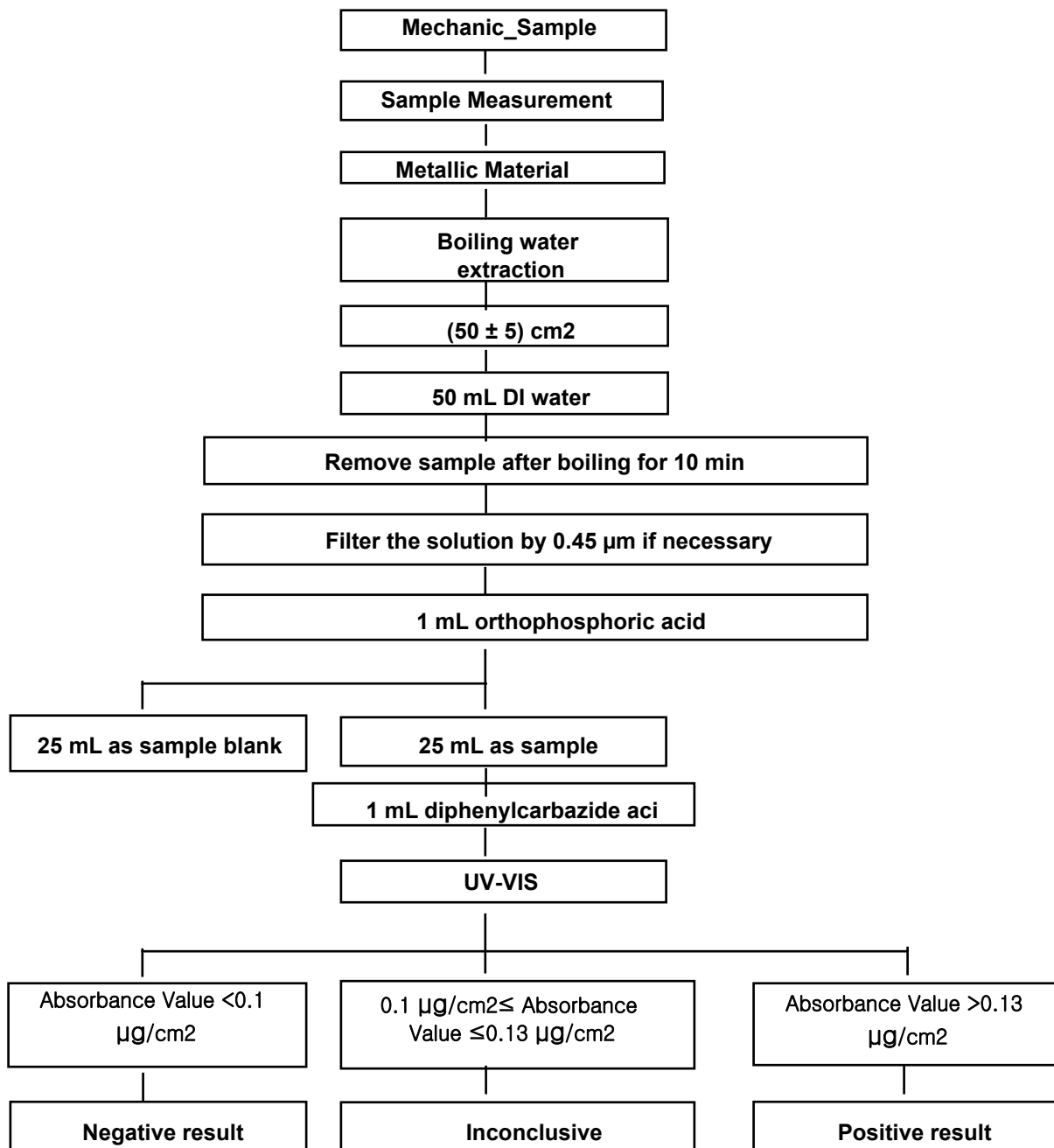
Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr⁶⁺ /PBBs&PBDEs Testing



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



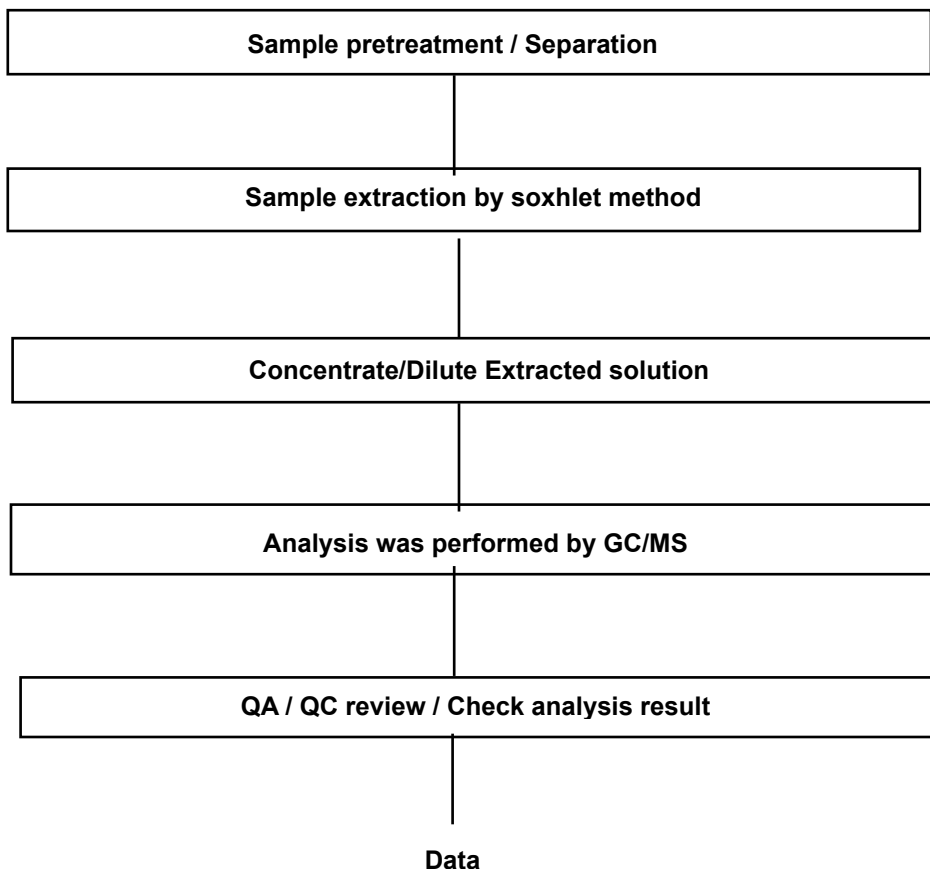
Cr⁶⁺



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm http://www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).



Flow Chart for Phthalate Test



*** End of Report ***