

HANWHA SOLUTIONS CORPORATION

76, Gajeong-ro
Yuseong-gu, Daejeon
Korea



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

SGS File No. : AYAA25-37779
Product Name : LLDPE
Item No./Part No. : N/A
Received Date : 2025. 09. 02
Test Period : 2025. 09. 02 to 2025. 09. 09
Test Results : For further details, please refer to following page(s)



Monet Jeong

Technical Manager / SGS Korea Co., Ltd

This test report is limited to the samples and sample names provided by the client and does not guarantee the quality of all the client's products. It shall not be used for public relation, advertisement, lawsuit and shall not be used by excepts from it. This test report can be checked through the <http://rohs.kr.sgs.com/checkreport/main>. This test report is not related to KS Q ISO/IEC 17025 and Korea Laboratory Accreditation Scheme.

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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).



Test Report No. F690101/LF-CTSAYAA25-37779

Issued Date : 2025. 09. 09

Page 2 of 11

Sample No. : AYAA25-37779.001
Sample Description : LLDPE
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, by ICP-OES | 0.5 | N.D. |
| Lead (Pb) | mg/kg | With reference to IEC 62321-5 : 2013, by ICP-OES | 5 | N.D. |
| Mercury (Hg) | mg/kg | With reference to IEC 62321-4 : 2013+AMD1:2017CSV, by ICP-OES | 2 | N.D. |
| Hexavalent Chromium (Cr VI)+ | mg/kg | With reference to IEC 62321-7-2 : 2017, by UV-Vis and/or with reference to IEC 62321-5 : 2013, by ICP-OES | 8 | N.D. |

Total Metals

| Test Items | Unit | Test Method | MDL | Results |
|---------------|-------|---|-----|---------|
| Antimony (Sb) | mg/kg | With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES | 10 | N.D. |

Flame Retardants-PBBs/PBDEs

| Test Items | Unit | Test Method | MDL | Results |
|--------------------------|-------|--|-----|---------|
| Monobromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Dibromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tribromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tetrabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Pentabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Hexabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Heptabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Octabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Nonabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Decabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Monobromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Dibromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tribromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, 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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).



Test Report No. F690101/LF-CTSAYAA25-37779

Issued Date : 2025. 09. 09

Page 3 of 11

Sample No. : AYAA25-37779.001

Sample Description : LLDPE

Item No./Part No. : N/A

Materials : N/A

Flame Retardants-PBBs/PBDEs

| Test Items | Unit | Test Method | MDL | Results |
|--------------------------|-------|--|-----|---------|
| Pentabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Hexabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Heptabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Octabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Nonabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Decabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |

Phthalates

| Test Items | Unit | Test Method | MDL | Results |
|------------------------------------|-------|--|-----|---------|
| Di-(2-ethylhexyl) phthalate (DEHP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-butyl phthalate (DBP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Benzyl butyl phthalate (BBP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-isobutyl phthalate (DIBP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-isodecyl phthalate (DIDP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-isononyl phthalate (DINP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-n-octyl phthalate (DNOP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |
| Di-n-hexyl phthalate (DNHP) | mg/kg | With reference to IEC 62321-8 : 2017, by GC-MS | 50 | N.D. |

Chlorinated Paraffin

| Test Items | Unit | Test Method | MDL | Results |
|--|-------|---|-----|---------|
| Alkanes, C10~13, Short Chain Chlorinated Paraffins(SCCP) | mg/kg | With reference to ISO 18219, by GC-MS(CI) | 50 | N.D. |

Organotin Compounds

| Test Items | Unit | Test Method | MDL | Results |
|---------------------|-------|--|-----|---------|
| Dibutyltin (DBT) | mg/kg | with reference to ISO 17353:2004, by GC/MS | 1 | N.D. |
| Tributyltin (TBT) | mg/kg | with reference to ISO 17353:2004, by GC/MS | 1 | N.D. |
| Triphenyltin (TPHT) | mg/kg | with reference to ISO 17353:2004, by GC/MS | 1 | N.D. |
| Diocetyl tin (DOT) | mg/kg | with reference to ISO 17353:2004, by GC/MS | 1 | 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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).

Test Report No. F690101/LF-CTSAYAA25-37779

Issued Date : 2025. 09. 09

Page 4 of 11

Sample No. : AYAA25-37779.001
 Sample Description : LLDPE
 Item No./Part No. : N/A
 Materials : N/A

Flame Retardants

| Test Items | Unit | Test Method | MDL | Results |
|--------------------------------|-------|--|-----|---------|
| Hexabromocyclododecane (HBCDD) | mg/kg | With reference to USEPA 3540 C, by LC/MS | 5 | N.D. |

Other(s)

| Test Items | Unit | Test Method | MDL | Results |
|-------------|-------|--|-----|---------|
| Bisphenol A | mg/kg | with reference to EPA 3550C, HPLC/MS or HPLC/MS/MS | 10 | N.D. |

- NOTE:
- (1) N.D. = Not detected. (<MDL)
 - (2) mg/kg = ppm, ug/kg = ppb, mg/L = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) ** = Qualitative analysis (No Unit)
 - (6) Negative = Undetectable / Positive = Detectable
 - (7) + = a. The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
 b. If the content of Total Chromium (Cr) is greater than the MDL of Hexavalent Chromium (Cr(VI)), it is the result of hexavalent Chromium by UV-VIS.
 - (8) ++ = a. The sample is positive for Cr VI if the Cr VI concentration is greater than 0.13 ug/cm2.
 The sample coating is considered to contain Cr VI.
 b. The sample is negative for Cr VI if Cr VI is ND(concentration less than 0.10 ug/cm2).
 The coating is considered a non-Cr VI 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.

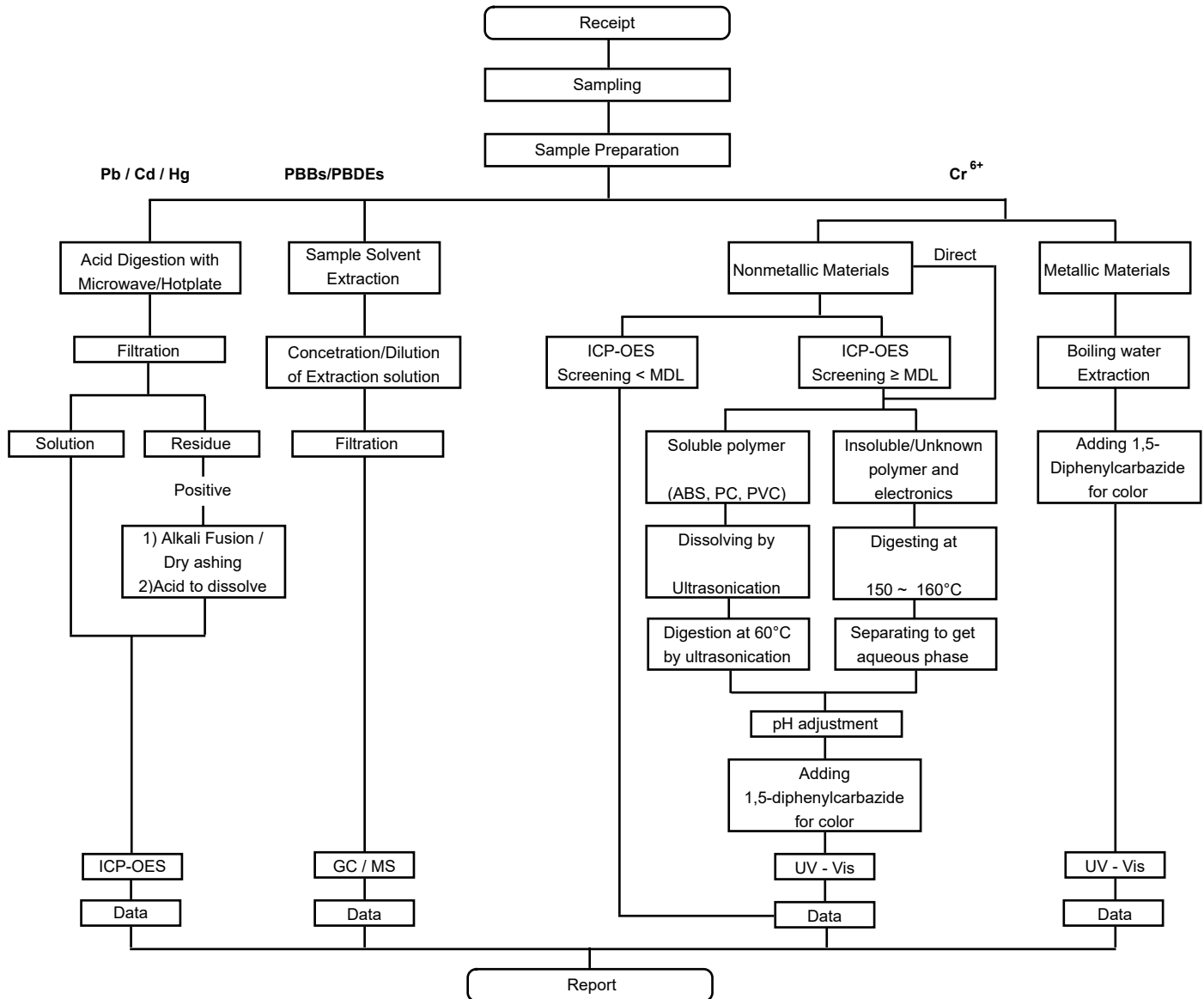
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).

Picture of Sample as Received:



AYAA25-37779.001

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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).

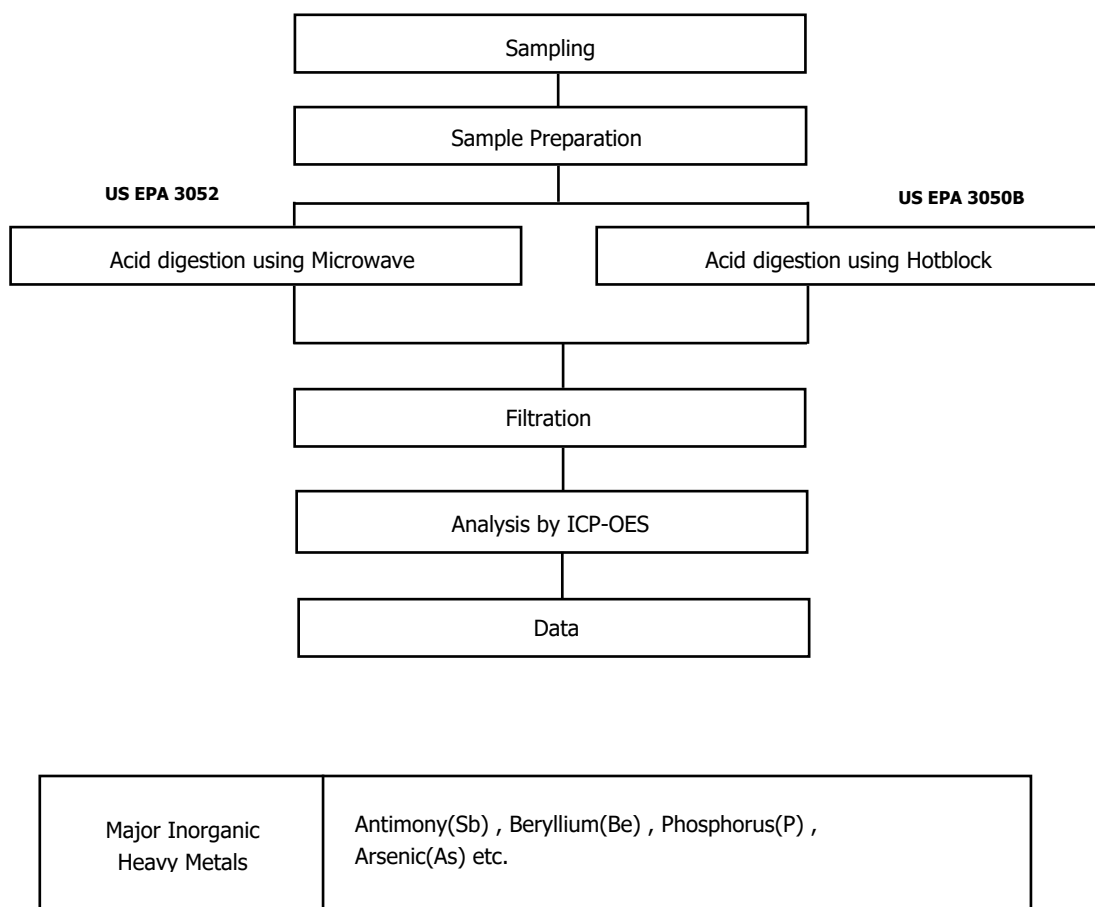
Flow Chart for RoHS Pb / Cd / Hg / Cr⁶⁺ / PBBs&PBDEs Test


The samples were dissolved totally at the acid digestion step of the above flow chart for Cd, Pb, Hg.

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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).



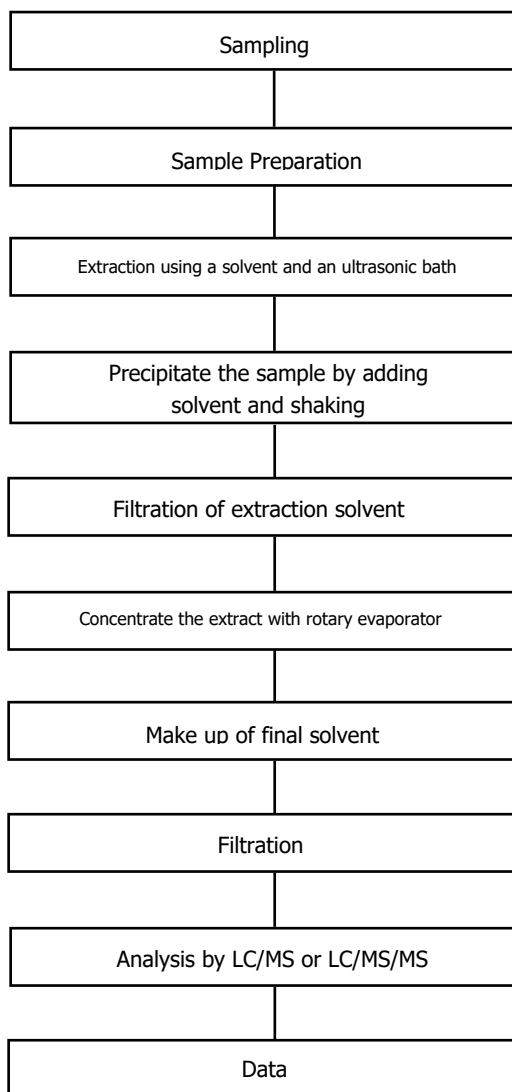
Flow Chart for Heavy metal



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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).



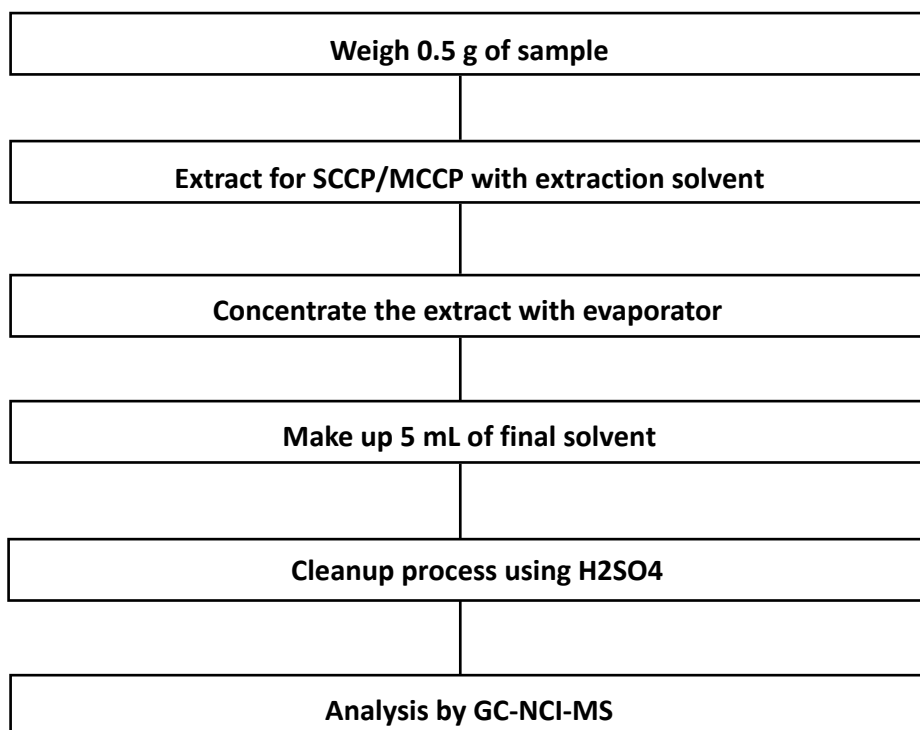
Flow Chart for Bisphenols



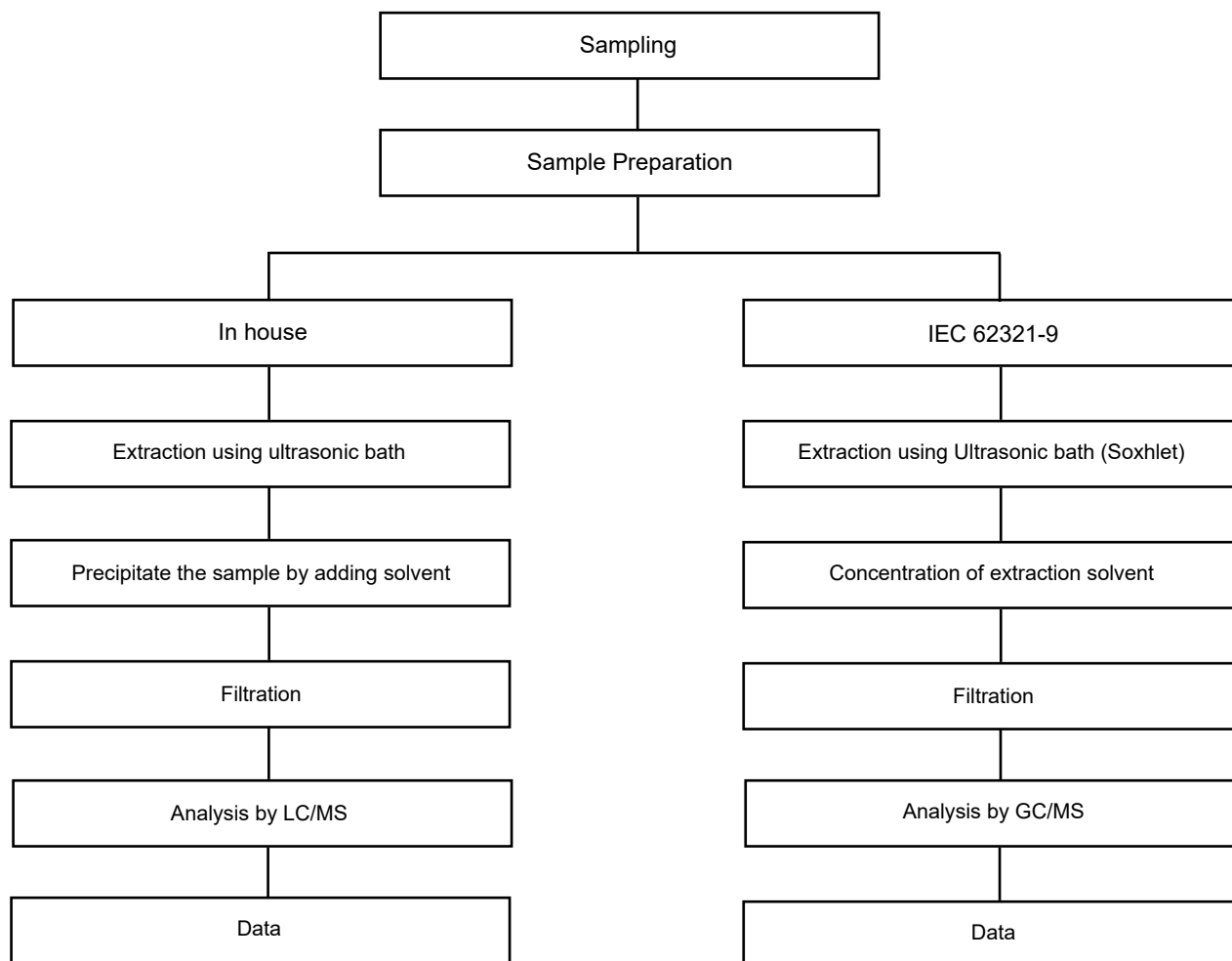
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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 SCCP/MCCP



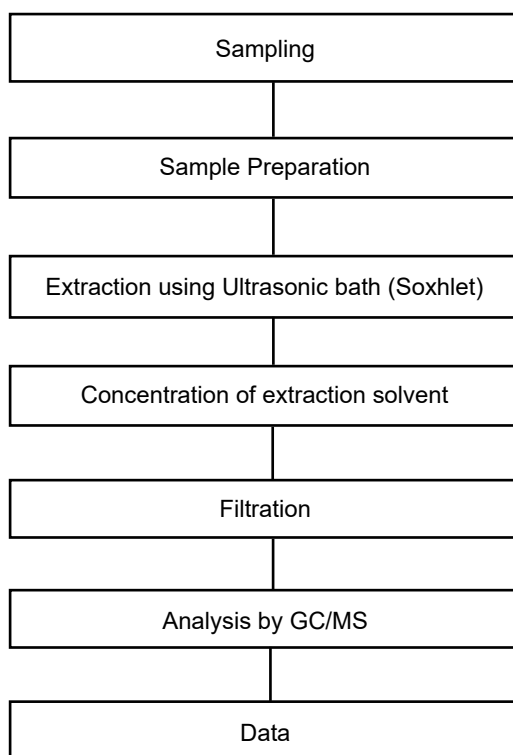
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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 HBCDD


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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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 IEC Phthalates



*** End of Report ***

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 <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. 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).