

DAIHAN INK CO., LTD.

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Pyeongtaek-si, Gyeonggi-do
Korea



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

SGS File No. : AYAA18-66152
Product Name : SOLFREE MAGENTA_SOLFREE YELLOW_SOLFREE CYAN_SOLFREE BLACK_SOLFREE
YELLOW GREENISH_SOLFREE YELLOW(LF)
Item No./Part No. : N/A
Received Date : 2018. 12. 11
Test Period : 2018. 12. 11 to 2018. 12. 14
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.



Jeff Jang / Chemical Lab Mgr

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Test Report No. F690101/LF-CTSAYAA18-66152

Issued Date : 2018. 12. 14

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Sample No. : AYAA18-66152.001
Sample Description : SOLFREE MAGENTA_SOLFEE YELLOW_SOLFEE CYAN_SOLFEE BLACK_SOLFEE
YELLOW GREENISH_SOLFEE YELLOW(LF)
Item No./Part No. : N/A
Materials : Liquid

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 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis and Microwave system/or with reference to IEC 62321-5:2013, determination of Chromium by ICP-OES.	8	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. : AYAA18-66152.001
Sample Description : SOLFREE MAGENTA_SOLFREE YELLOW_SOLFREE CYAN_SOLFREE BLACK_SOLFREE YELLOW GREENISH_SOLFREE YELLOW(LF)
Item No./Part No. : N/A
Materials : Liquid

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.

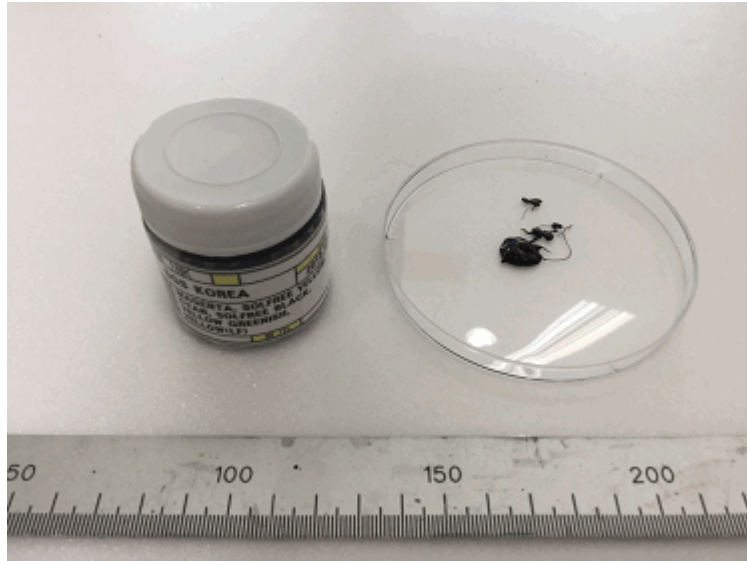
Phthalates

Test Items	Unit	Test Method	MDL	Results
Di-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to IEC 62321-8 ; 2017 , GC/MS	50	N.D.
Di-butyl phthalate (DBP)	mg/kg	With reference to IEC 62321-8 ; 2017 , GC/MS	50	N.D.
Benzyl butyl phthalate (BBP)	mg/kg	With reference to IEC 62321-8 ; 2017 , GC/MS	50	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	With reference to IEC 62321-8 ; 2017 , GC/MS	50	N.D.

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- 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 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 Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.

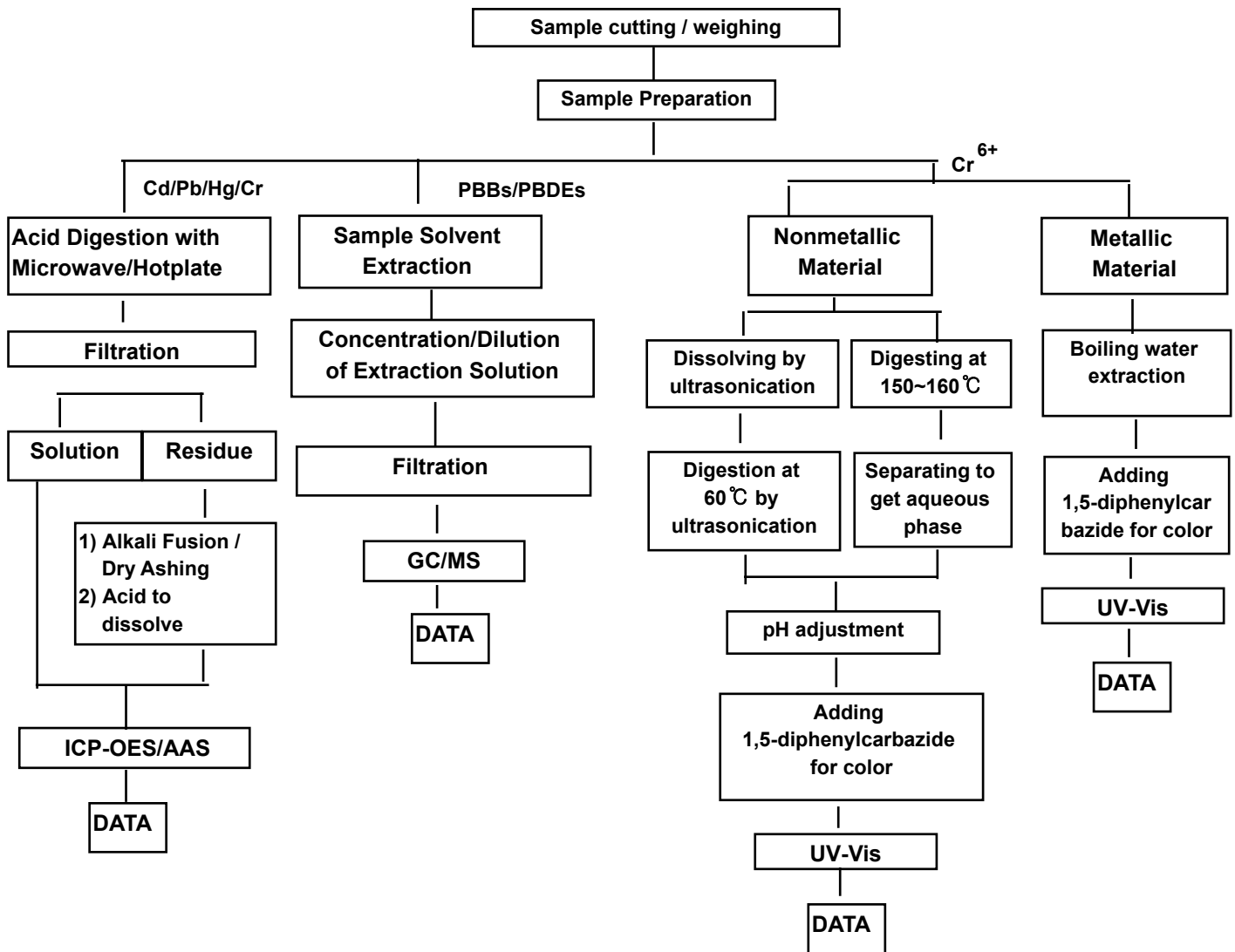
Picture of Sample as Received:



AYAA18-66152.001

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

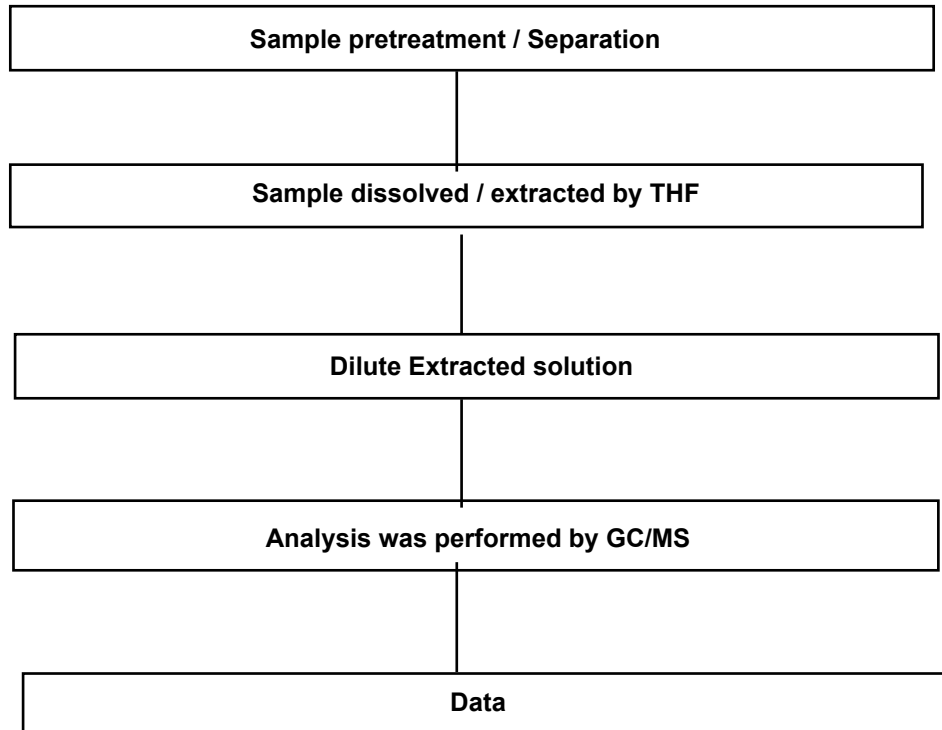


The samples were dissolved totally at the acid digestion step of the above flow chart for Cd,Pb,Hg
 Section Chief : Minkyu Park

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Flow Chart for Phthalate Test



*** End of Report ***

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