

**SKCS CO., LTD.**

45 Daepyeonggyo-gil, Gwangdeok-myeon Dongnam-gu  
Cheonan-si, Chungcheong-nam-do  
Korea

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

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**SGS File No.** : AYHA20-05942  
**Product Name** : Anti-Bacteria Film  
**Item No./Part No.** : Anti-Bacteria Film Clear Type  
**Received Date** : 2020. 05. 28  
**Test Period** : 2020. 05. 28 to 2020. 06. 02  
**Test Results** : For further details, please refer to following page(s)

SGS Korea Co., Ltd.



Tommy Oh / Chemical Lab Mgr

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**Sample No.** : AYHA20-05942.001  
**Sample Description** : Transparent film  
**Item No./Part No.** : Anti-Bacteria Film Clear Type  
**Materials** : N/A

**Heavy Metals**

| Test Items                   | Unit  | Test Method  | MDL | Results |
|------------------------------|-------|--|-----|---------|
| Cadmium (Cd)                 | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Cadmium by ICP-OES)  | 0.5 | N.D.    |
| Lead (Pb)                    | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Lead by ICP-OES)   | 5   | N.D.    |
| Mercury (Hg)                 | mg/kg | With reference to IEC 62321-4:2013<br>(Determination of Mercury by ICP-OES)  | 2   | N.D.    |
| Hexavalent Chromium (Cr VI)* | mg/kg | With reference to IEC 62321-7-2:2017,<br>determination of Hexavalent Chromium by<br>Colorimetric Method using UV-Vis and<br>Microwave system and /or with reference to IEC<br>62321-5:2013, determination of Chromium by<br>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 (GC-MS) | 5   | N.D.    |
| Dibromobiphenyl          | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Tribromobiphenyl         | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Tetrabromobiphenyl       | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Pentabromobiphenyl       | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Hexabromobiphenyl        | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Heptabromobiphenyl       | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Octabromobiphenyl        | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Nonabromobiphenyl        | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Decabromobiphenyl        | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Monobromodiphenyl ether  | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Dibromodiphenyl ether    | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Tribromodiphenyl ether   | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Pentabromodiphenyl ether | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Hexabromodiphenyl ether  | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Heptabromodiphenyl ether | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Octabromodiphenyl ether  | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Nonabromodiphenyl ether  | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |
| Decabromodiphenyl ether  | mg/kg | With reference to IEC 62321-6:2015 (GC-MS) | 5   | N.D.    |

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**Sample No.** : AYHA20-05942.001  
**Sample Description** : Transparent film  
**Item No./Part No.** : Anti-Bacteria Film Clear Type  
**Materials** : N/A

**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.    |

- 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.
  - (8) The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 This test report is not related to Korea Laboratory Accreditation Scheme .

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CQP-708 PF01 (01)

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**Picture of Sample as Received:**



**AYHA20-05942.001**

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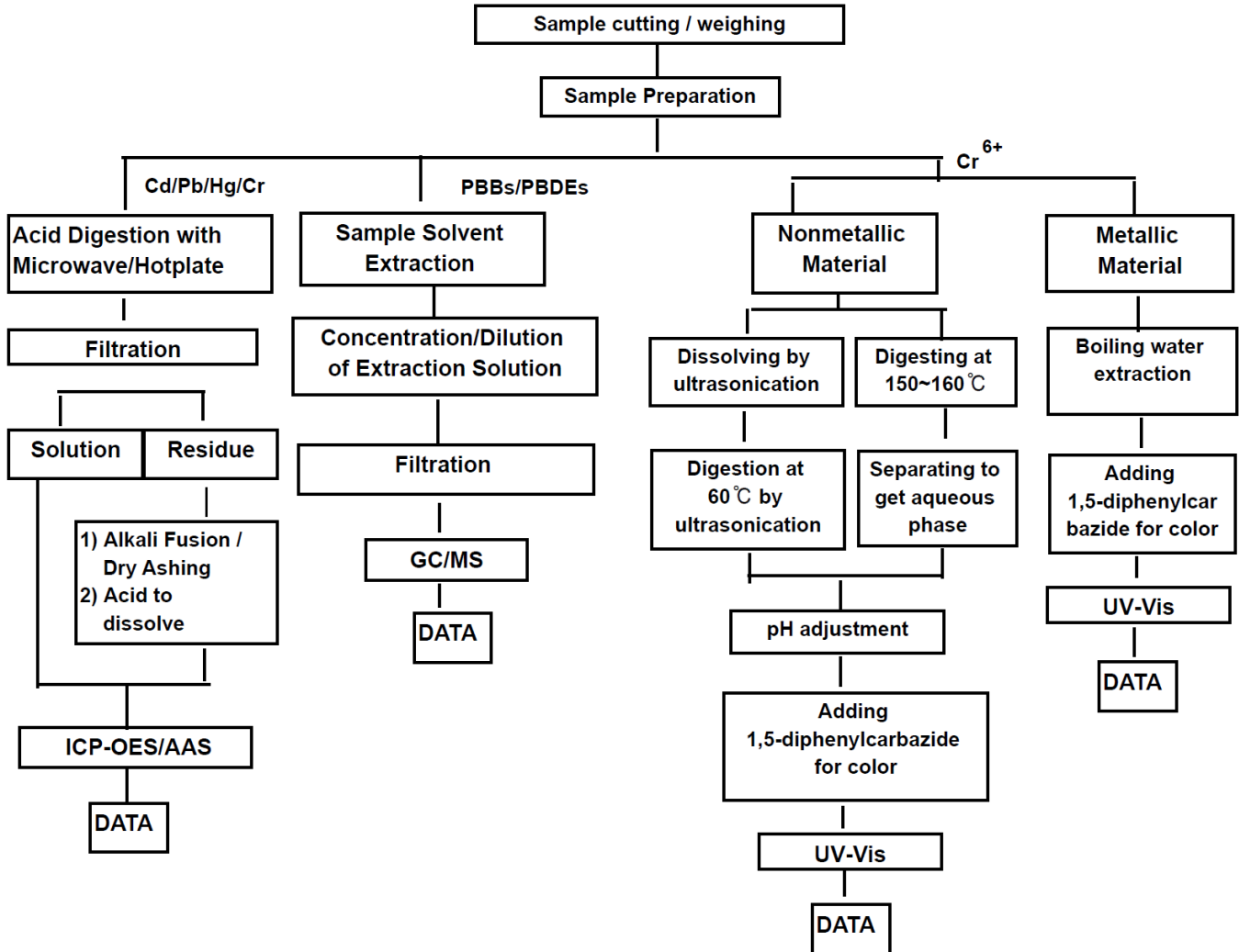
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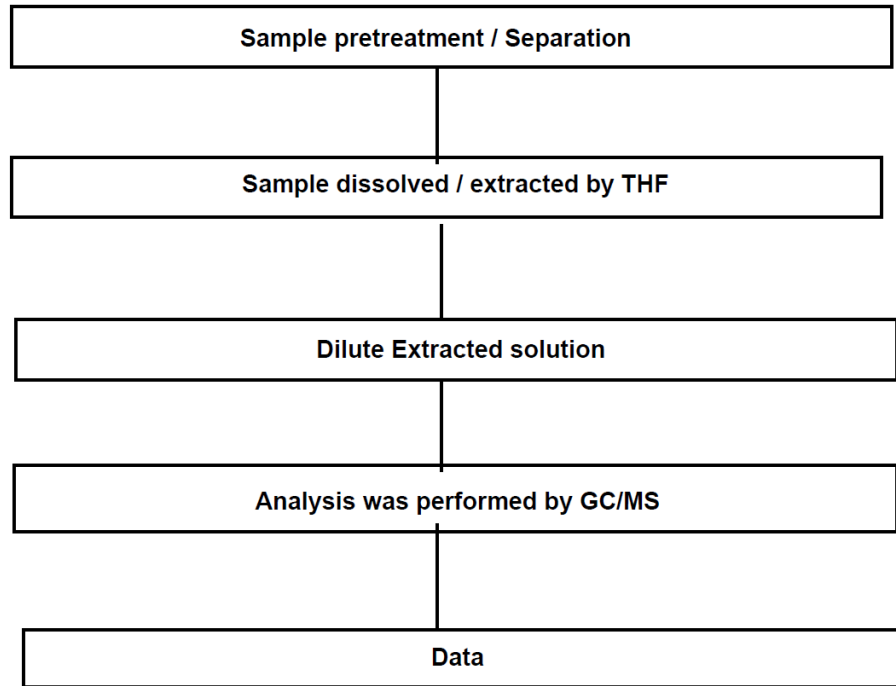
Testing Flow Chart for RoHS: Cd/Pb/Hg/Cr<sup>6+</sup> /PBBs&PBDEs Testing



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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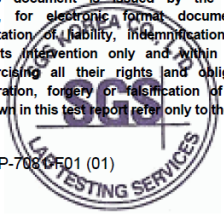
### Flow Chart for Phthalate Test



\*\*\* End of Report \*\*\*

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