



Test Report No. F690101/LF-CTSAYAA15-29267

Issued Date : 2015. 06. 12

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SAMSUNG ELECTRONICS CO., LTD.

95 Samsung-ro, Giheung-gu
Yongin-si, Gyeonggi-do
Korea

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

SGS File No. : AYAA15-29267
Product Name : 3030 white PKG
Item No./Part No. : N/A
Received Date : 2015. 06. 05
Test Period : 2015. 06. 05 to 2015. 06. 12
Test Comments : By the applicant's specific request, the sampling and testing was performed only for the part indicated in the photo without disassembly.
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.

Jeff Jang / Chemical Lab Mgr

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Sample No. : AYAA15-29267.001
Sample Description : 3030 white PKG
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) | 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 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Dibromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Tribromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Tetrabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Pentabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Hexabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Heptabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Octabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Nonabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Decabromobiphenyl | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Monobromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Dibromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Tribromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |

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Sample No. : AYAA15-29267.001
Sample Description : 3030 white PKG
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 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Hexabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Heptabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Octabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Nonabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |
| Decabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS) | 5 | N.D. |

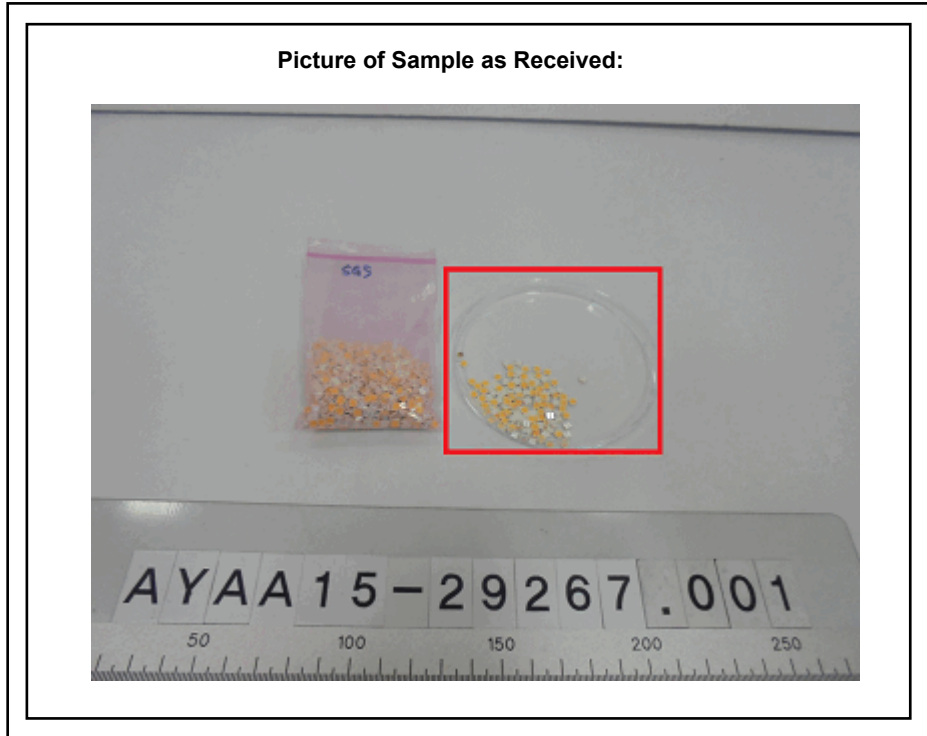
Halogen Content

| Test Items | Unit | Test Method | MDL | Results |
|--------------|-------|--------------------------------|-----|---------|
| Bromine(Br) | mg/kg | With reference to EN 14582, IC | 30 | N.D. |
| Chlorine(Cl) | mg/kg | With reference to EN 14582, IC | 30 | N.D. |
| Fluorine(F) | mg/kg | With reference to EN 14582, IC | 30 | 243 |
| Iodine(I) | mg/kg | With reference to EN 14582, IC | 50 | N.D. |

Other(s)

| Test Items | Unit | Test Method | MDL | Results |
|---|-------|---------------------------|-----|---------|
| PFOA (Perfluorooctanoic acid) | mg/kg | US EPA 3540C/3550C, LC/MS | 1 | N.D. |
| PFOS (Perfluorooctane Sulfonates-Acid/Metal Salt/Amide) | mg/kg | US EPA 3540C/3550C, LC/MS | 1 | N.D. |

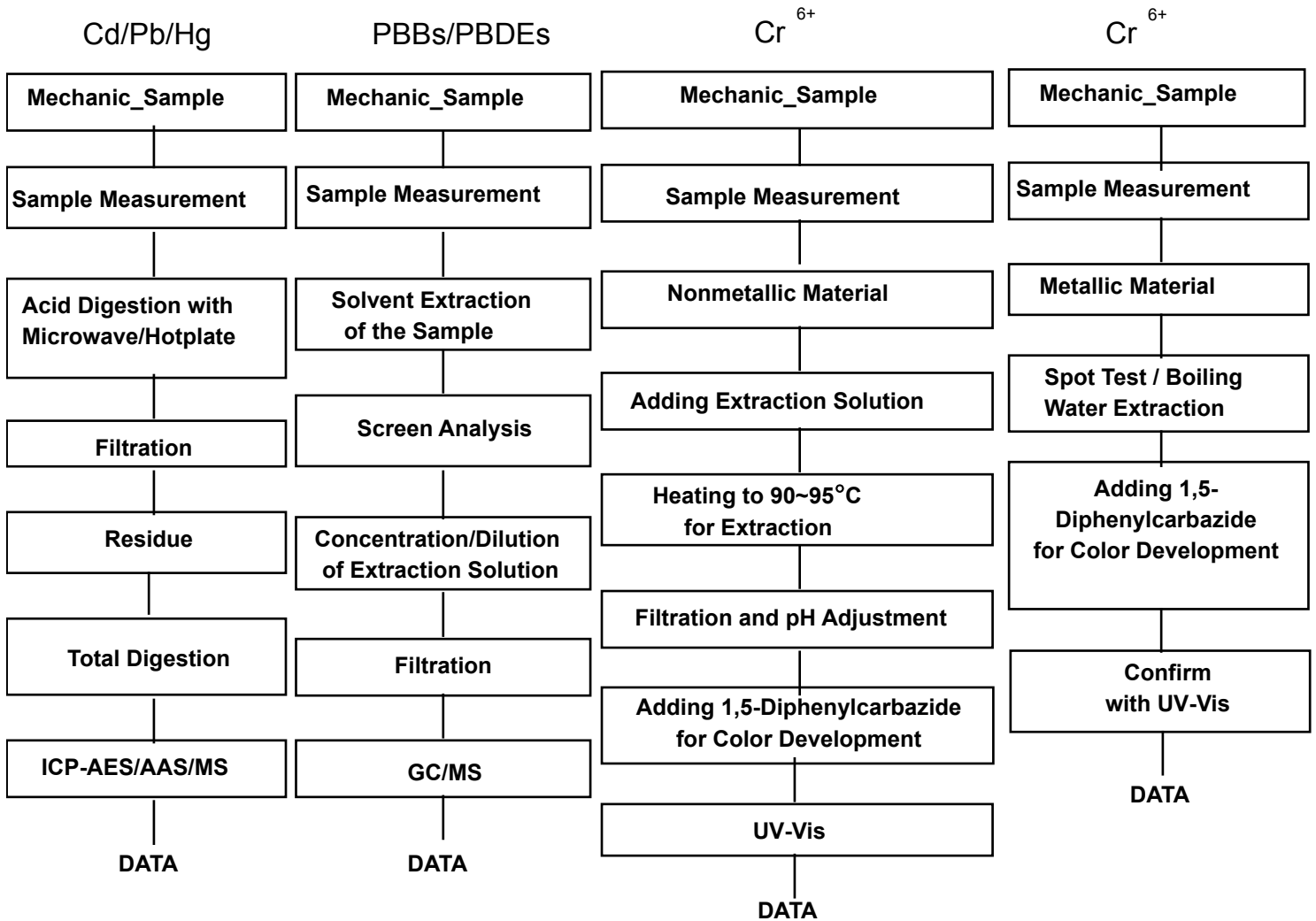
- NOTE:
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) Negative = Undetectable / Positive = Detectable
 - (6) ** = Qualitative analysis (No Unit)
 - (7) * = Boiling-water-extraction:
 Negative = Absence of CrVI coating
 Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.



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

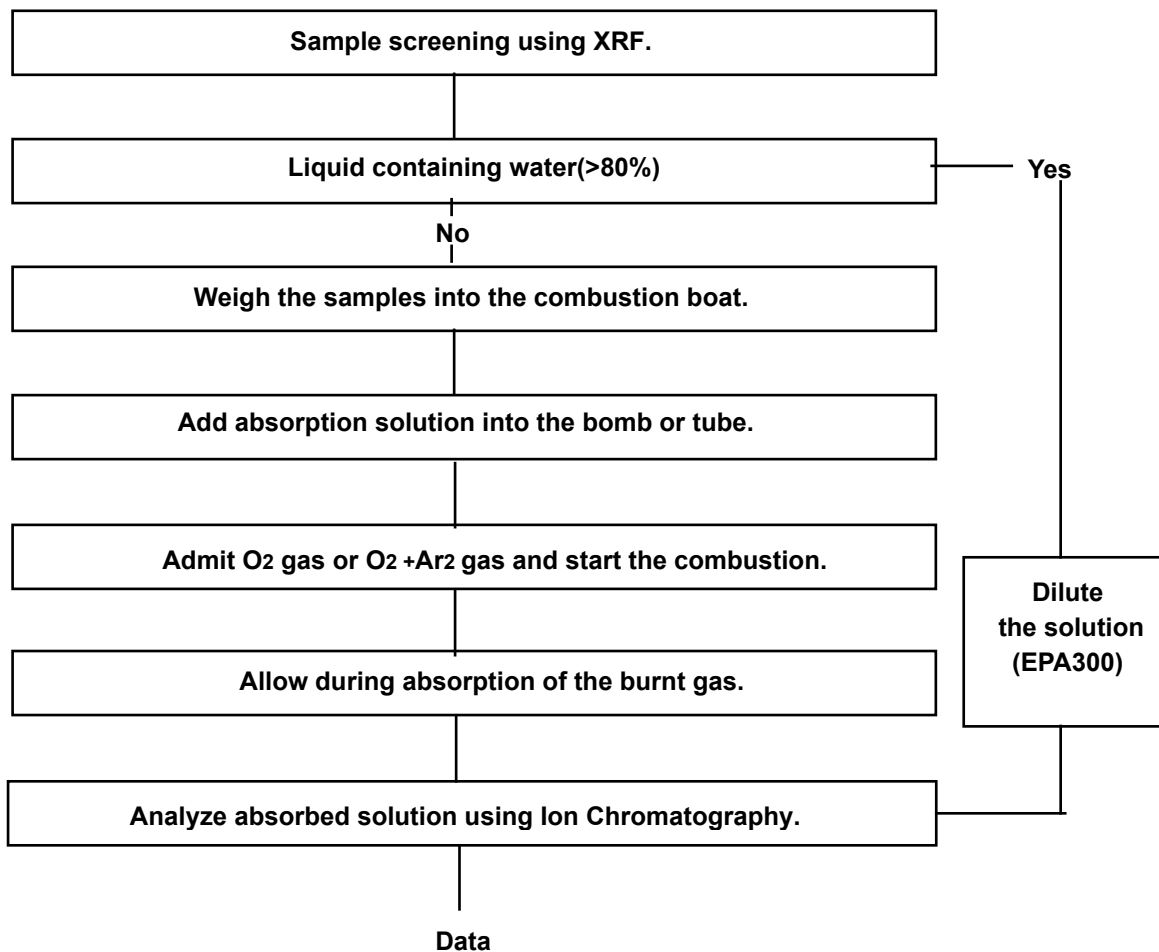


The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.
Section Chief : Gilsae Yi

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Flow Chart for Halogen Test



*** End of Report ***

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