



# Test Report No. F690101/LF-CTSAYAA14-31226

Issued Date : 2014. 06. 26

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## LG CHEM, LTD.

#762-1, Jungheung-dong  
Yeosu-si, Jeonnam  
Korea

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

**SGS File No.** : AYAA14-31226  
**Product Name** : LUPOY PC 1302(a)-(#)  
**Item No./Part No.** : N/A  
**Received Date** : 2014. 06. 24  
**Test Period** : 2014. 06. 25 to 2014. 06. 26  
**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. : AYAA14-31226.001  
Sample Description : LUPOY PC 1302(a)-(#)  
Item No./Part No. : N/A  
Materials : Polycarbonate

## 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 62321:2008 (Determination<br>of Hexavalent Chromium by spot test/Colorimetric<br>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<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Dibromobiphenyl          | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Tribromobiphenyl         | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Tetrabromobiphenyl       | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Pentabromobiphenyl       | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Hexabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Heptabromobiphenyl       | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Octabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Nonabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Decabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Monobromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Dibromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Tribromodiphenyl ether   | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination<br>of PBBs and PBDEs by GC-MS) | 5   | N.D.    |

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Sample No. : AYAA14-31226.001  
Sample Description : LUPOY PC 1302(a)-(#)  
Item No./Part No. : N/A  
Materials : Polycarbonate

## 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 | BS EN 14582:2007 , IC | 30  | N.D.    |
| Chlorine(Cl) | mg/kg | BS EN 14582:2007 , IC | 30  | N.D.    |
| Fluorine(F)  | mg/kg | BS EN 14582:2007 , IC | 30  | N.D.    |
| Iodine(I)    | mg/kg | BS EN 14582:2007 , IC | 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) \* = 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 cm<sup>2</sup> sample surface area.

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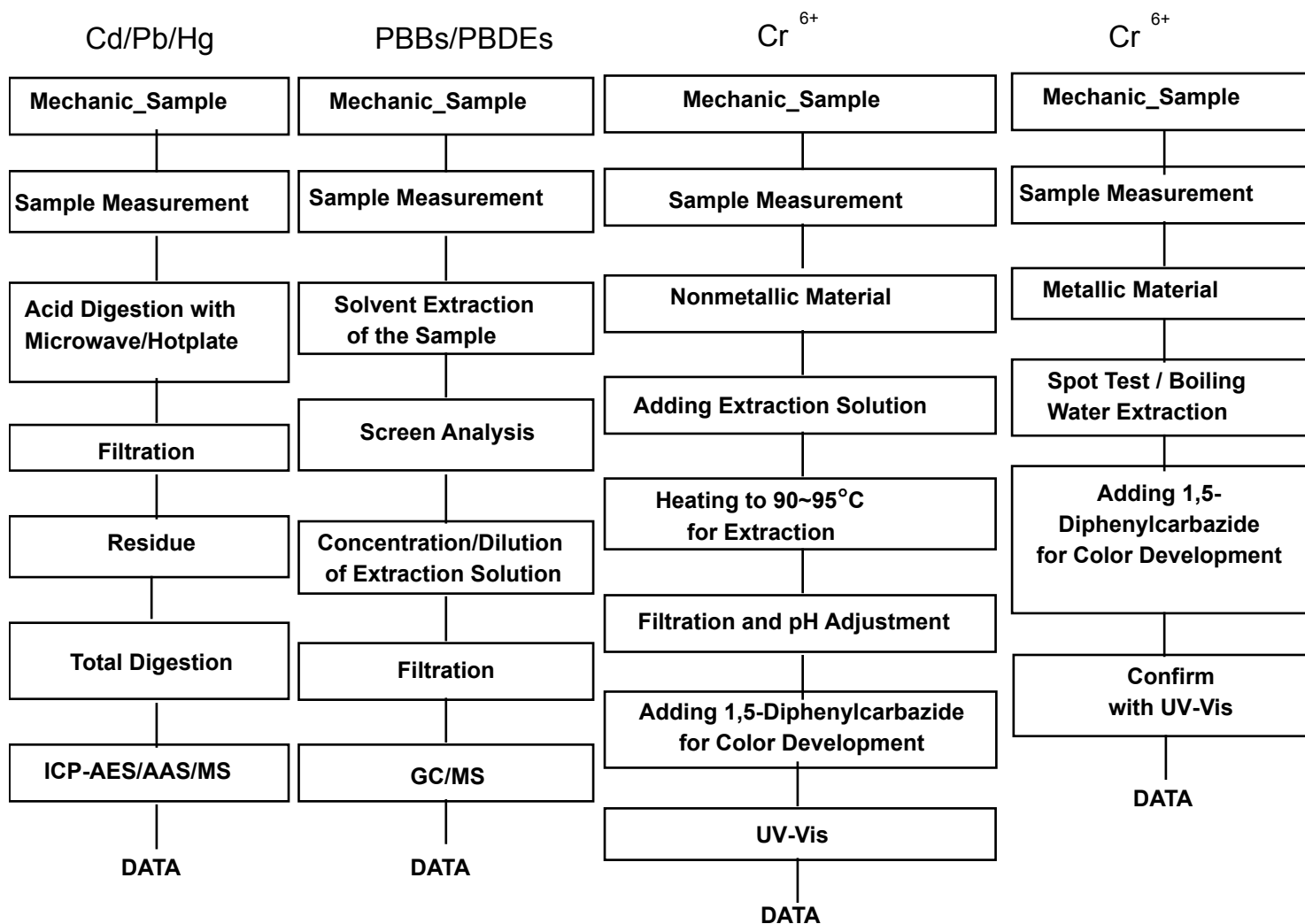
Picture of Sample as Received:



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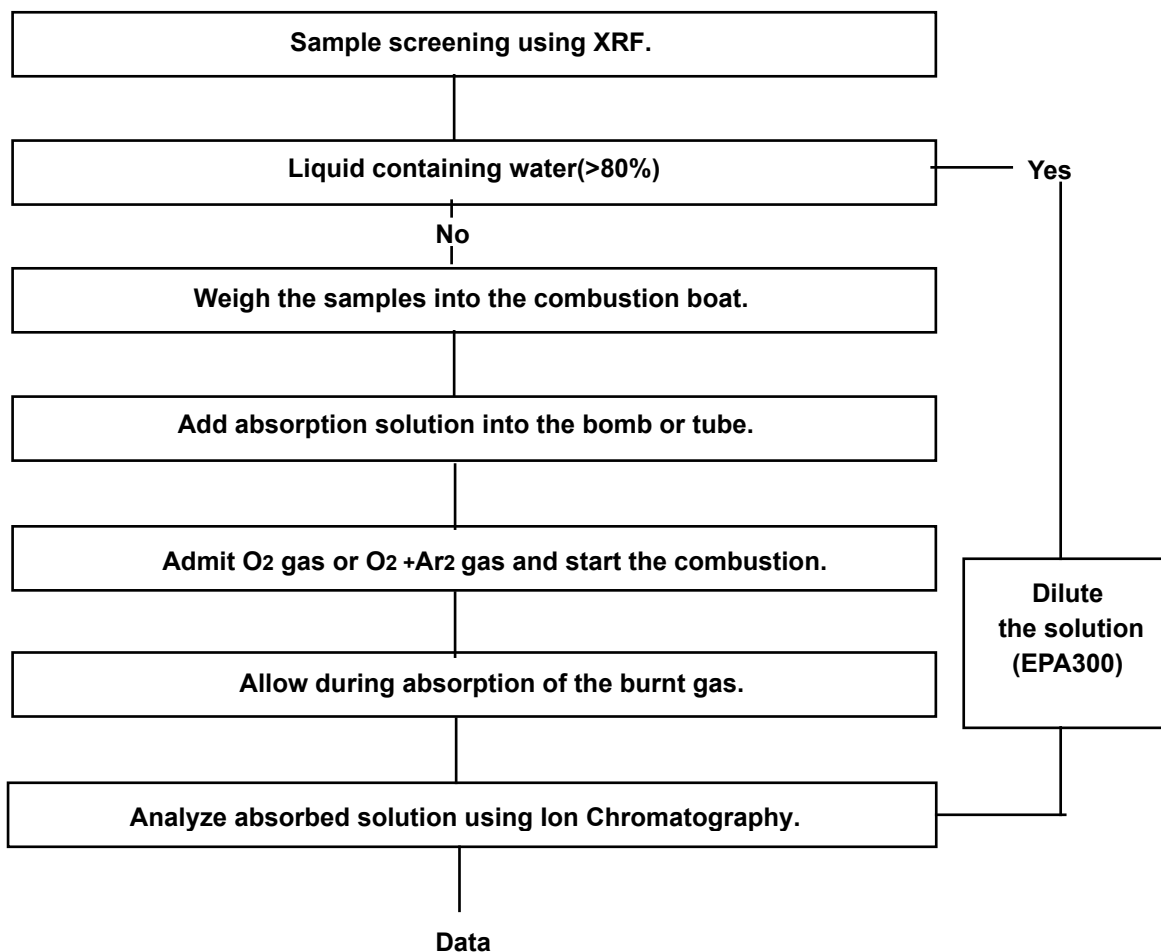
**Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr<sup>6+</sup> /PBBs&PBDEs Testing**



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



### Flow Chart for Halogen Test



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