

**TEST REPORT**

**Report No. : PN:HL:6490005910**

**DATE : 08/06/2015**

**RAND POLYPRODUCTS PVT. LTD.**

GAT NO. 3A/2, OLD GAT NO. 1649, VILL GHOTAWADE, TAL. MULSHI

PUNE-412115

INDIA

**CONTACT PERSON : MR NAYAK U. V**

**THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS :**

|                           |                          |  |
|---------------------------|--------------------------|--|
| <b>SAMPLE DESCRIPTION</b> | EPOCAST 3124             |  |
| <b>SAMPLE RECD ON</b>     | 21/05/2015               | <b>TESTING PERIOD : 03/06/2015 to 08/06/2015</b> |
| <b>TEST(S) REQUESTED</b>  | ROHS 6 E                 |  |
| <b>TEST METHOD</b>        | :IEC 62321 : 2008 / 2013 |  |

**CONCLUSION :** Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) **comply** with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Test result:

**RoHS Directive 2011/65/EU Annex II**

| Test Item(s):                 | Unit  | Test Method  | Results     | MDL         | Limit |
|-------------------------------|-------|--|-------------|-------------|-------|
| Cadmium(Cd)                   | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Cd by ICP-OES)               | n.d.        | 5           | 100   |
| Lead (Pb)                     | mg/kg | With reference to IEC 62321-5:2013<br>(Determination of Pb by ICP-OES)               | n.d.        | 5           | 1000  |
| Mercury (Hg)                  | mg/kg | With reference to IEC 62321-4:2013<br>(Determination of Hg by ICP-OES)               | n.d.        | 5           | 1000  |
| Hexavalent Chromium<br>(CrVI) | mg/kg | With reference to IEC 62321:2008<br>(Determination of Cr-VI by UV-Spectrophotometer) | n.d.        | 2           | 1000  |
| <b>Sum of PBBs</b>            | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | <b>n.d.</b> | <b>n.d.</b> | 1000  |
| Monobromobiphenyl             | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |
| Dibromobiphenyl               | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |
| Tribromobiphenyl              | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |
| Tetrabromobiphenyl            | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |
| Hexabromobiphenyl             | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |
| Pentabromobiphenyl            | mg/kg | With reference to IEC 62321:2008<br>(Determination of PBB by GC-MS)                  | n.d.        | 50          | -     |

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| Test Item(s):            | Unit  | Test Method   | Results     | MDL | Limit |
|--------------------------|-------|---|-------------|-----|-------|
| Heptabromobiphenyl       | mg/kg | With reference to IEC 62321:2008 (Determination of PBB by GC-MS)  | n.d.        | 50  | -     |
| Octabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination of PBB by GC-MS)  | n.d.        | 50  | -     |
| Nonabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination of PBB by GC-MS)  | n.d.        | 50  | -     |
| Decabromobiphenyl        | mg/kg | With reference to IEC 62321:2008 (Determination of PBB by GC-MS)  | n.d.        | 50  | -     |
| <b>Sum of PBDEs</b>      | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | <b>n.d.</b> | -   | 1000  |
| Monobromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Dibromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Tribromodiphenyl ether   | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Pentabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Hexabromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Heptabromodiphenyl ether | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Octabromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Nonabromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |
| Decabromodiphenyl ether  | mg/kg | With reference to IEC 62321:2008 (Determination of PBDE by GC-MS) | n.d.        | 50  | -     |

Note :

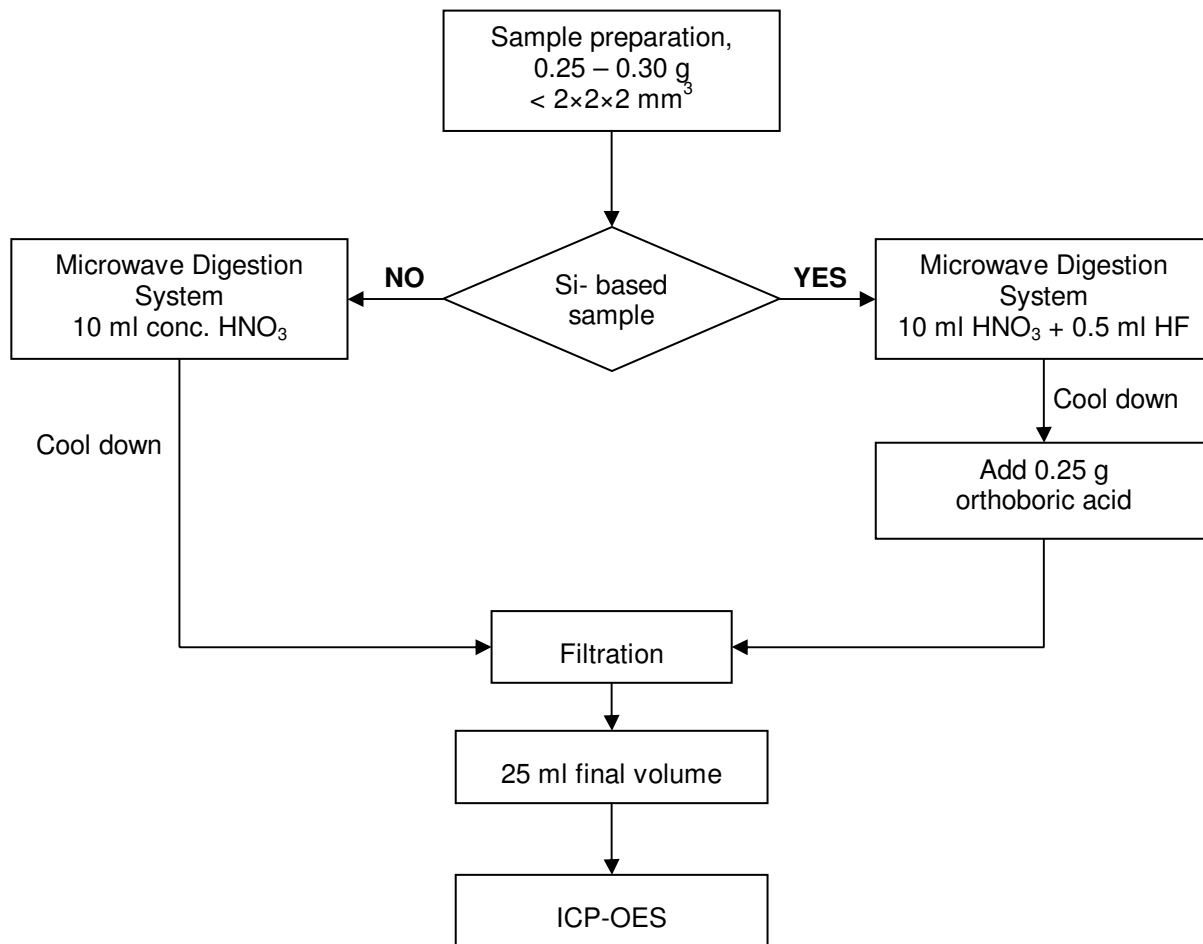
- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) n.d.= not detected
- (c) MDL = Method Detection Limit
- (d) - = not regulated

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### Process Flow for analysis of metal contents in plastics, metals and electronic components sample



Analyzed By: Vijaykumar Phapale

Checked By: Amit Kulkarni

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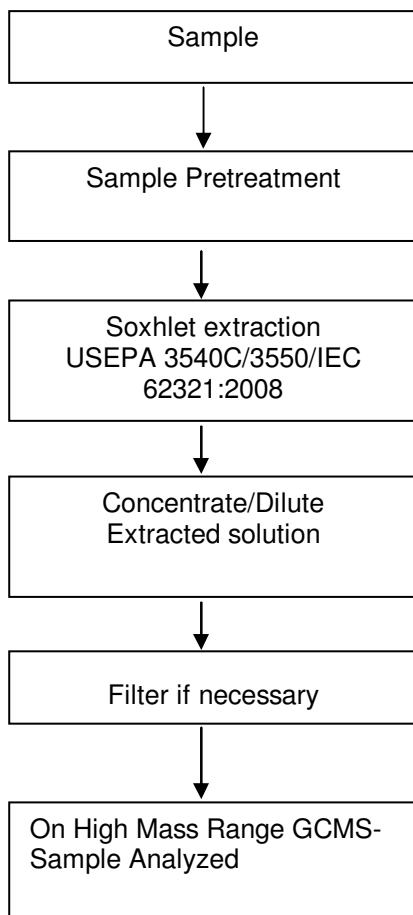
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### Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample



Analyzed By : Sachin Vibhute

Checked By : Amit Kulkarni

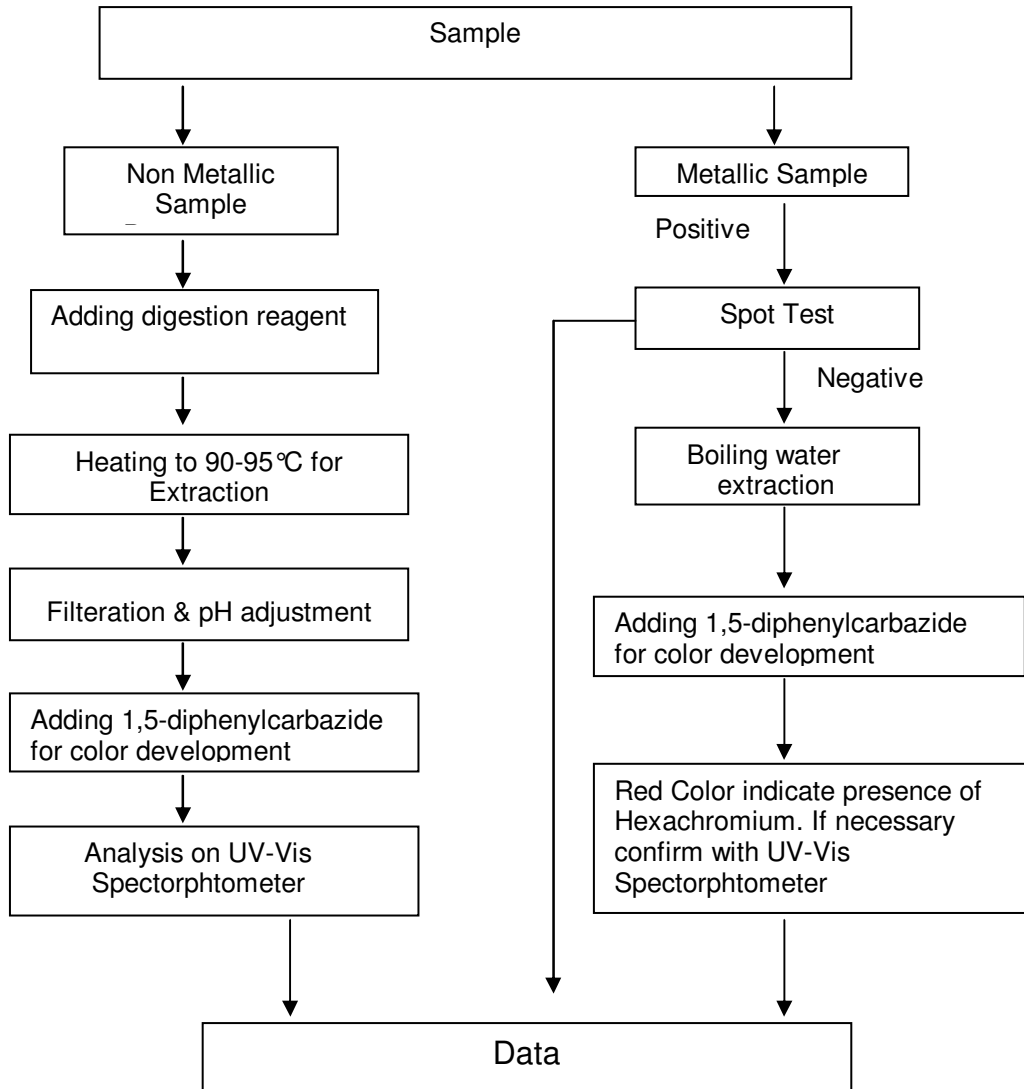
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**Process Flow for analysis of Hexachromium contents in plastics, metals and electronic components**

**sample**



**Analyzed By: Sachin Vibhute**

**Checked By: Amit Kulkarni**

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Sample Photo: as received



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

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