



SETSCO SERVICES PTE LTD

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Business Reg. No. 196900269D
Your Ref : PO-02054

Our Ref : CH-23321/LZP

Date : 16 November 2009

TEST REPORT

(This Report is issued subject to the terms & conditions set out below)

Page 1 of 6

Tested For : **PT. Venturindo Jaya Batam
SM Business Centre Blok B
Jl. Yos Sudarso, Batu Ampar
Batam 29432
Indonesia**

Contact : **Ms Erna Weng
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62 778 413175**

Date Sample Received : **06 November 2009**

Date Commenced : **06 November 2009**

Date Completed : **13 November 2009**

Sample Description

Sample was received on 06 November 2009 with reference:

Part Description : **FLEX FPC - E95355900A**

Test Requested

To determine the content of the following metals and organic compounds in the sample submitted in compliance to RoHS Directive EU 2002/95/EC:

Metals:

1. Cadmium (Cd)
2. Lead (Pb)
3. Mercury (Hg)
4. Hexavalent Chromium (Cr(VI))

Organic Compounds:

5. Polybrominated biphenyls (PBBs)
6. Polybrominated diphenyl ethers (PBDEs)

AUTHORIZED BY:


LEI ZHI PEI
MANAGER

BIOLOGICAL & CHEMICAL TECHNOLOGY DIVISION
SETSCO SERVICES PTE LTD

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Our Ref : CH-23321/LZP
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Test Results :

| Item No. | Element / Compound Name | Result (ppm / mg/kg) | RoHS Directive 2002/95/EC (ppm / mg/kg) |
|----------|--|--|---|
| 1 | Cadmium (Cd), ppm wt | Not Detected | 100 |
| 2 | Lead (Pb), ppm wt | Not Detected | 1000 |
| 3 | Mercury (Hg), ppm wt | Not Detected | 1000 |
| 4 | Hexavalent Chromium (Cr ⁶⁺), ppm wt | Not Detected | 1000 |
| 5 | PBBs (Polybrominated Biphenyl) (C₁₂H_{10-x}Br_x) Monobromobiphenyl Dibromobiphenyl Tribromobiphenyl Tetrabromobiphenyl Pentabromobiphenyl Hexabromobiphenyl Heptabromobiphenyl Octobromobiphenyl Nonabromobiphenyl Decabromobiphenyl | Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected | |
| | Total PBBs (Polybrominated Biphenyl) / Sum of above | Not Detected | 1000 |
| 6 | PBDEs (Polybrominated Diphenyl Ether) (C₁₂H_{10-x}Br_xO) Monobromodiphenyl Ether Dibromodiphenyl Ether Tribromodiphenyl Ether Tetrabromodiphenyl Ether Pentabromodiphenyl Ether Hexabromodiphenyl Ether Heptabromodiphenyl Ether Octobromodiphenyl Ether Nonabromodiphenyl Ether Decabromodiphenyl Ether | Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected | |
| | Total PBDEs (Polybrominated Diphenyl Ether) / Sum of above | Not Detected | 1000 |

Notes : 1) ppm wt : mg/kg

- 2) Detection Limit : a) Cadmium : 2.0 ppm
 b) Lead : 10.0 ppm
 c) Mercury : 2.0 ppm
 d) Hexavalent Chromium : 2.0 ppm
 e) Polybrominated Biphenyls : 5.0 ppm
 f) Polybrominated Diphenyl Ethers : 5.0 ppm

3) Above tests were carried out by Setsco's chemists : Ee Suat Sian and Yong Soh Wah.



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Test Methods :

Preconditioning Method :

- a) BCTD/MC/IHM111/2007 (Rev 0) : Elemental (Cd, Pb, Hg, Cr) Analysis
(with reference to IEC 62321, Ed.1 and EPA 3052)
- b) BCTD/MC/IHM071/2008 (Rev 3) : Determination of Hexavalent Chromium
(with reference to IEC 62321, Ed.1 and EPA 3060A)
- c) BCTD/MC/IHM075/2004 (Rev 1) : PBBs and PBDEs Analysis
(with reference to IEC 62321, Ed.1 and EPA 8270)

Measurement Method :

- a) BCTD/MC/IHM111/2007 (Rev 0) : Elemental (Cd, Pb, Hg, Cr) Analysis
(with reference to IEC 62321, Ed.1 and EPA 6010B)
- b) BCTD/MC/IHM071/2008 (Rev 3) : Determination of Hexavalent Chromium
(with reference to IEC 62321, Ed.1 and EPA 7196A)
- c) BCTD/MC/IHM075/2004 (Rev 1) : PBBs and PBDEs Analysis
(with reference to IEC 62321, Ed.1 and EPA 8270)

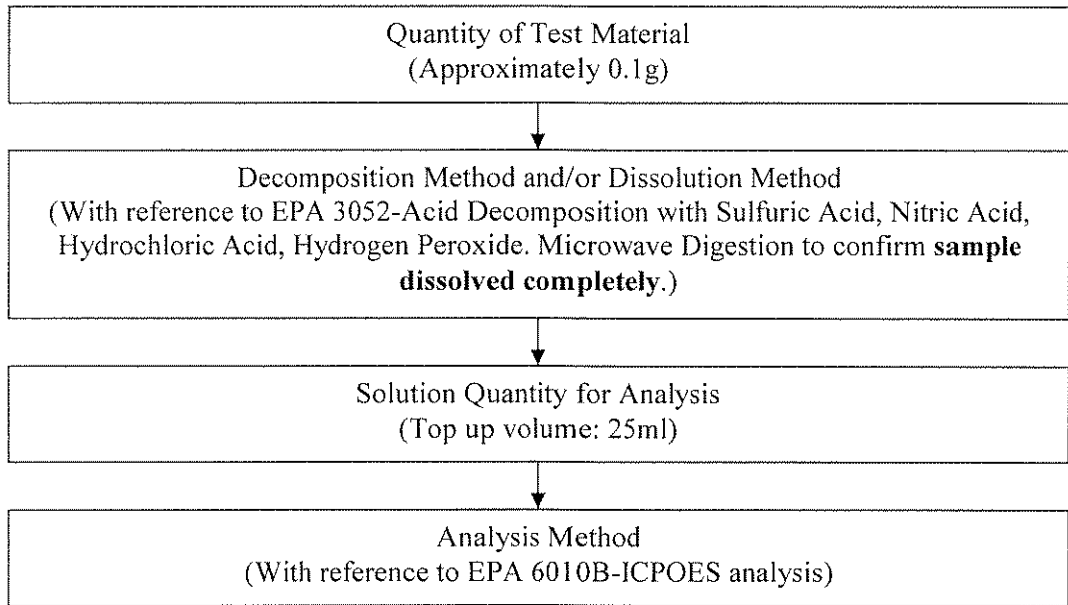


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RoHS Substances Analysis Flowchart - Acid Digestion

Elements: Cadmium (Cd), Total Chromium (Cr), Lead (Pb), Mercury (Hg)

Pretreatment:



Instrument Used:

- 1) ICP-OES: Perkin Elmer ICP Optima 5300DV
- 2) Microwave: Milestone Ethos Touch Control

Standard Used:

Merck : Cadmium, Chromium, Lead and Mercury standard solution.

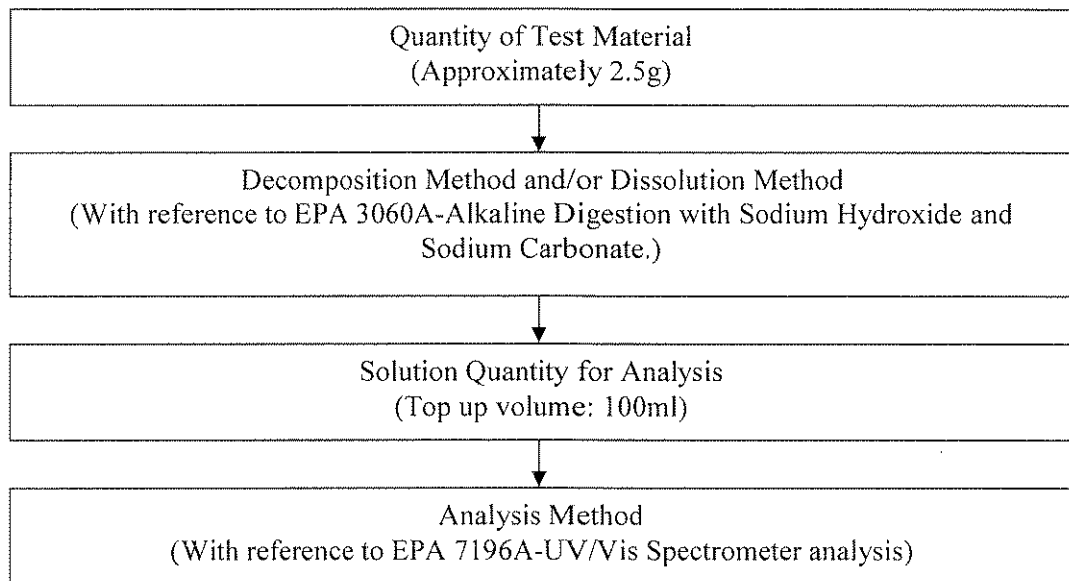


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RoHS Substances Analysis Flowchart - Alkaline Digestion

Elements: Hexavalent Chromium (Cr^{6+})

Pretreatment:



Instrument Used:

UV/Vis Spectrometer: Shimadzu UV-Vis Spectrometer, UV-1601/A1075

Standard Used:

Merck: Potassium Dichromate and Lead Chromate.

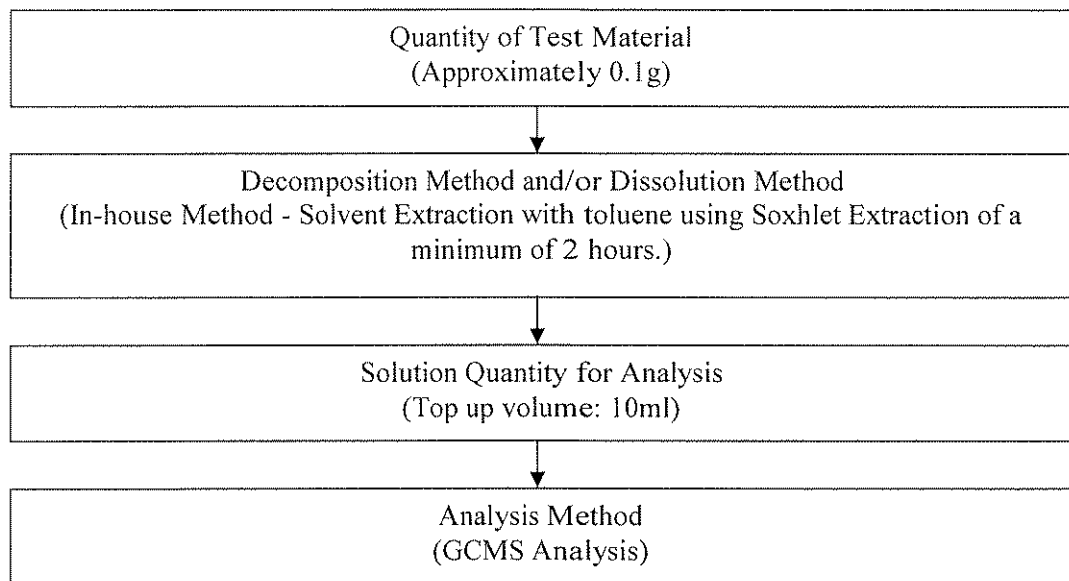


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RoHS Substances Analysis Flowchart - Solvent Extraction

Elements : Polybrominated Biphenyls (PBB) and Polybrominated Diphenyls ether (PBDE)

Pretreatment:



Instrument Used:

GCMS: ThermoFinnigan PolarisQ Trace GC Ultra AS3000

Standard Used:

AccuStandard:

- a) PBBs : Bromobiphenyl, Dibromobiphenyl, Tribromobiphenyl, Tetrabromobiphenyl, Pentabromobiphenyl, Hexabromobiphenyl, Decabromobiphenyl.
- b) PBDEs : Bromodiphenyl ether, Dibromodiphenyl ether, Tribromodiphenyl ether, Tetrabromodiphenyl ether, Pentabromodiphenyl ether, Hexabromodiphenyl ether, Heptabromodiphenyl ether, Octabromodiphenyl ether, Nona bromodiphenyl ether, Decabromodiphenyl ether.

