

**TEST REPORT**

**SAMPLE DESCRIPTION** : THE SUBMITTED SAMPLES SAID TO BE- PP (POLYPROPYLENE)  
RECYCLE CLEAR PELLETS

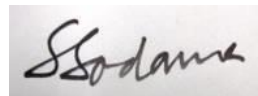
TESTED COMPONENT:  
[1] PP (POLYPROPYLENE) RECYCLE CLEAR PELLETS

DATE RECEIVED : 09<sup>TH</sup> AUG, 2021  
BUYER'S NAME : --  
BUYING AGENT/ CONTACT : --  
ORDER NO. : --  
ARTICLE/REF/PART NO : --  
COLOR : --  
GRADE : --  
MANUFACTURER'S NAME : --  
RAW MATERIAL SUPPLIER : --  
TYPE OF MATERIAL : --

**TESTS CONDUCTED:** AS PER THE REQUEST BY THE APPLICANT. FOR FURTHER DETAILS PLEASE REFER TO THE ENCLOSED PAGE (S).

STANDARD	RESULT
(1) (A) ROHS DIRECTIVE (2011/65/EU) RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT	PASS
(2) ROHS DIRECTIVE (2011/65/EU) AND AMENDMENT COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 WITH EFFECTIVE FROM 22 JULY 2019 - PHTHALATE CONTENT	PASS

PREPARED & CHECKED BY  
For INTERTEK INDIA PVT. LTD



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TECHNICAL MANAGER-HARDLINE



**TEST REPORT**

**TEST CONDUCTED**

**Test Result Summary:**

Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Heavy Metal</b>				
Cadmium (Cd) Content	ppm	With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.	ND	5
Lead (Pb) Content	ppm	With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.	ND	5
Mercury (Hg) Content	ppm	With reference to IEC 62321-4:2013+AMD1:2017, by microwave or acid digestion and determined by ICP-OES.	ND	5
Chromium VI (Cr6+) Content	ppm	With reference to IEC 62321-7-2: 2017, organic solvent was used to dissolve or swell sample matrix, followed by alkaline digestion and determined by UV-Vis Spectrophotometer.	ND	5
Chromium VI (Cr6+) Content @	µg/ cm <sup>2</sup>	With reference to IEC 62321-7-1: 2015, by boiling water extraction and determined by UV-Vis Spectrophotometer or visual observation.	--	0.10



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Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Polybrominated Biphenyls (PBBs)</b>				
Monobrominated Biphenyls (MonoBB)	ppm	With reference to IEC 62321-6: 2015, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	ND	5
Dibrominated Biphenyls (DiBB)	ppm		ND	5
Tribrominated Biphenyls (TriBB)	ppm		ND	5
Tetrabrominated Biphenyls (TetraBB)	ppm		ND	5
Pentabrominated Biphenyls (PentaBB)	ppm		ND	5
Hexabrominated Biphenyls (HexaBB)	ppm		ND	5
Heptabrominated Biphenyls (HeptaBB)	ppm		ND	5
Octabrominated Biphenyls (OctaBB)	ppm		ND	5
Nonabrominated Biphenyls (NonaBB)	ppm		ND	5
Decabrominated Biphenyl (DecaBB)	ppm		ND	5
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>				
Monobrominated Diphenyl Ethers (MonoBDE)	ppm	With reference to IEC 62321-6: 2015, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	ND	5
Dibrominated Diphenyl Ethers (DiBDE)	ppm		ND	5
Tribrominated Diphenyl Ethers (TriBDE)	ppm		ND	5
Tetrabrominated Diphenyl Ethers (TetraBDE)	ppm		ND	5
Pentabrominated Diphenyl Ethers (PentaBDE)	ppm		ND	5
Hexabrominated Diphenyl Ethers (HexaBDE)	ppm		ND	5
Heptabrominated Diphenyl Ethers (HeptaBDE)	ppm		ND	5
Octabrominated Diphenyl Ethers (OctaBDE)	ppm		ND	5
Nonabrominated Diphenyl Ethers (NonaBDE)	ppm		ND	5
Decabrominated Diphenyl Ether (DecaBDE)	ppm		ND	5



**TEST REPORT**

Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Phthalates</b>				
Di(2-ethylhexyl) Phthalate (DEHP)	ppm	With reference to IEC 62321-8:2017, by solvent extraction and determined by GC-MS.	ND	50
Dibutyl Phthalate (DBP)	ppm		ND	50
Benzyl Butyl Phthalate (BBP)	ppm		ND	50
Di isobutyl Phthalate (DIBP)	ppm		ND	50

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg  
 ND = Not detected  
 RL = Reporting limit, quantitation limit of analyte in sample

@ The explanation of Chromium VI (Cr6+) analysis results

Colorimetric result	Qualitative Result	Explanation
< 0.10 µg/cm <sup>2</sup>	Negative	The result of sample is negative for Cr(VI). The sample coating is considered a non-Cr(VI) based coating.
≥ 0.10 µg/cm <sup>2</sup> and ≤ 0.13 µg/cm <sup>2</sup>	Inconclusive	The result of sample is considered to be inconclusive. If addition samples are available, recommend to add trials and get the average result for the final determination.
> 0.13 µg/cm <sup>2</sup>	Positive	The result of sample is positive for Cr(VI). The sample coating is considered to contain Cr(VI). A result expresses as Positive, while not an actual value, which indicates a visual observation was used.

**RoHS Limit**

Restricted Substances	Limits
Cadmium (Cd) content	0.01% (100ppm)
Lead (Pb) content	0.1% (1000ppm)
Mercury (Hg) content	0.1% (1000ppm)
Chromium VI (Cr6+) content	0.1% (1000ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000ppm)
Di(2-ethylhexyl) Phthalate (DEHP)	0.1% (1000ppm)
Dibutyl Phthalate (DBP)	0.1% (1000ppm)
Benzyl Butyl Phthalate (BBP)	0.1% (1000ppm)
Di isobutyl Phthalate (DIBP)	0.1% (1000ppm)

The limits were quoted from Annex II of 2011/65/EU and Amendment (EU) 2015/863 for homogeneous material.

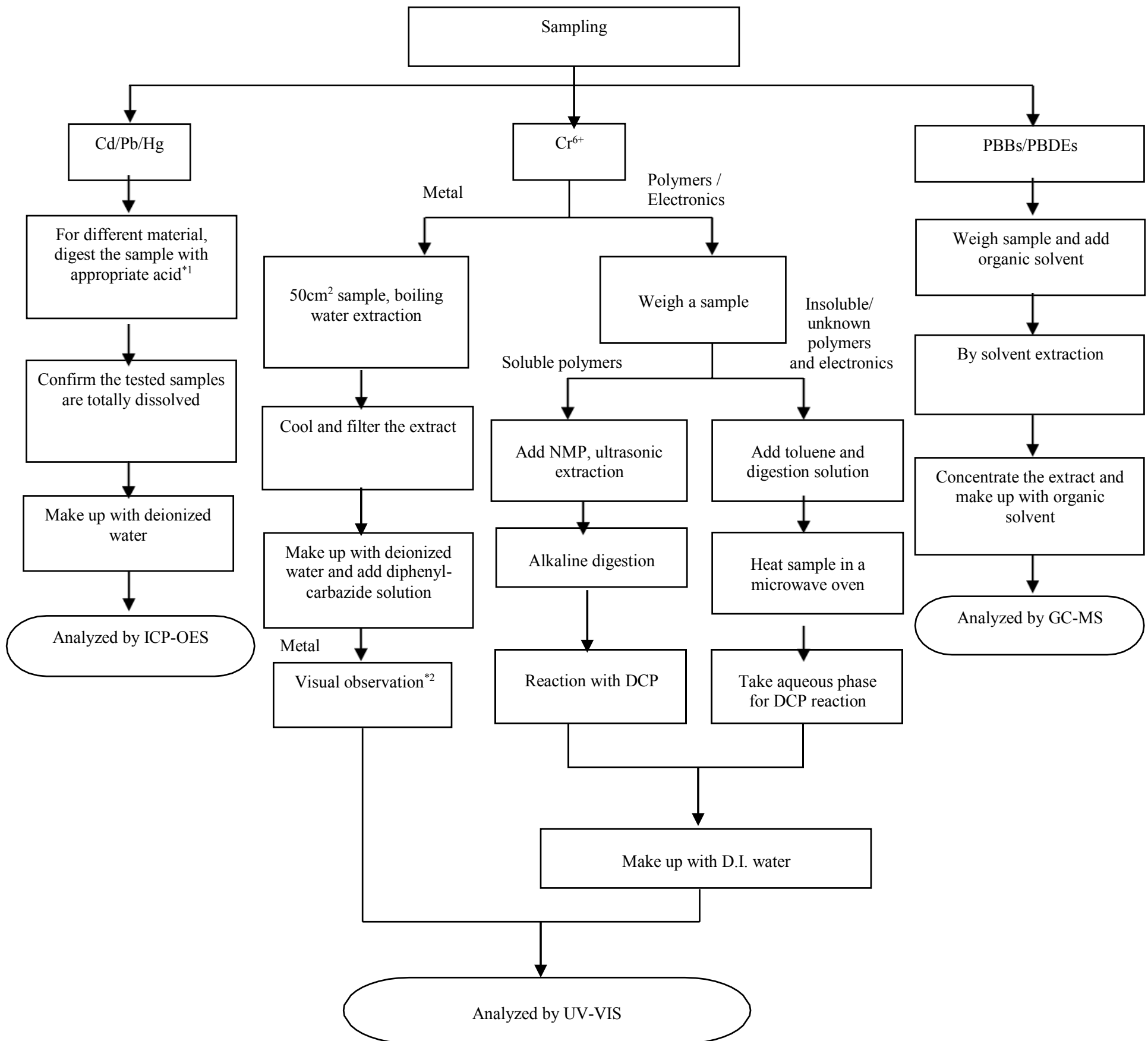


**TEST REPORT**

Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Content

Reference Standard : Cd/Pb: IEC 62321-5:2013; Hg: IEC 62321-4:2013+AMD1:2017;  
Chromium (VI): IEC 62321-7-1:2015 (boiling water extraction);  
Chromium (VI): IEC 62321-7-2:2017 (solvent and alkaline extraction);  
PBBs/PBDEs: IEC 62321-6:2015



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**Remarks:**

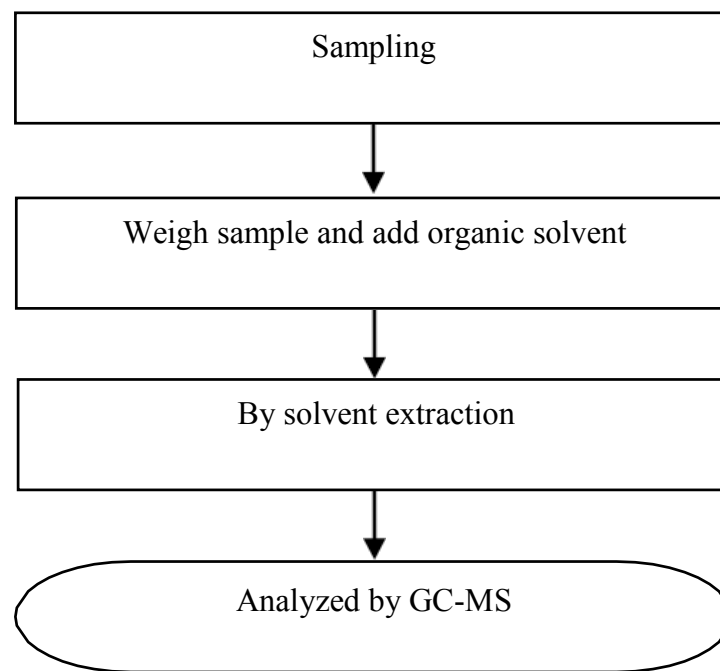
**\*1: List of Appropriate Acid :**

Material	Acid Added for Digestion
Polymers	HNO <sub>3</sub> ,HCl,HF,H <sub>2</sub> O <sub>2</sub> ,H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> ,HCl,HF
Electronics	HNO <sub>3</sub> ,HCl,H <sub>2</sub> O <sub>2</sub> ,HBF <sub>4</sub>

\*2: If sample solution is significantly more intense than 0.13 µg/cm<sup>2</sup> equivalent comparison standard, Chromium VI would be determined as detected, the result of visual observation is positive.

**Measurement Flowchart:**

Test for Phthalates Content  
Reference Method: IEC 62321-8:2017



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**# END OF TEST REPORT #**

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