TÜVINDIA

TC-13822

Test Report

Report No : TUV(I)/NL-734/24-25/NL-1224000615
Date : 27 Dec 2024
ULR : TC1382224000003848F

Name and address of customer	:	KHANNA TRADERS & ENGINEERS D-26 / E-20, Kasna Road, Site IV, Surajpur Industrial Area, Gautam Buddha nagar, Greater Noida, Uttar Pradesh Pincode-201306
Reg No.	:	NL-734/24-25
CA No.	:	NL-1224000615
Name of the sample	:	**PURE TIN**
Batch No./ Code no.	:	-
Discipline	:	Chemical
Product Category	:	Metal
Date of sample receipt	:	18 Dec 2024
Date(s) of analysis	:	18 Dec 2024 - 23 Dec 2024
Sample drawn by	:	Customer
Objectives of Examination	:	As per RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU
Test Requirement	:	RoHS 10E

Results Summary:

Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) **Comply** with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

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Authorized by
Rabindra Samal.
Assistant Manager- Operation – ACMT Lab

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Test Part Description:

Sample No.	Material Description	Remarks
1	**PURE TIN**	-

Test Results:

Sr. No.	Name of Test	Unit	Result	LOQ	Limits as per (EU) 2015/863
1	Cadmium(Cd)	mg/kg	ND	10	100
2	Lead (Pb)	mg/kg	292.17	50	1000
3	Mercury (Hg)	mg/kg	ND	25	1000
4	Hexavalent Chromium (CrVI) ▾	µg/cm^2	ND	0.10	Refer to Note No. 6
5	**Sum of PBBs**	**mg/kg**	**ND**	**-**	**1000**
5.1	Monobromobiphenyl	mg/kg	ND	50	-
5.2	Dibromobiphenyl	mg/kg	ND	50	-
5.3	Tribromobiphenyl	mg/kg	ND	50	-
5.4	Tetrabromobiphenyl	mg/kg	ND	50	-
5.5	Hexabromobiphenyl	mg/kg	ND	50	-
5.6	Pentabromobiphenyl	mg/kg	ND	50	-
5.7	Heptabromobiphenyl	mg/kg	ND	50	-
5.8	Octabromobiphenyl	mg/kg	ND	50	-
5.9	Nonabromobiphenyl	mg/kg	ND	50	-
5.10	Decabromobiphenyl	mg/kg	ND	50	-
6	**Sum of PBDEs**	**mg/kg**	**ND**	**-**	**1000**
6.1	Monobromodiphenyl ether	mg/kg	ND	50	-
6.2	Dibromodiphenyl ether	mg/kg	ND	50	-
6.3	Tribromodiphenyl ether	mg/kg	ND	50	-
6.4	Tetrabromodiphenyl ether	mg/kg	ND	50	-
6.5	Pentabromodiphenyl ether	mg/kg	ND	50	-
6.6	Hexabromodiphenyl ether	mg/kg	ND	50	-
6.7	Heptabromodiphenyl ether	mg/kg	ND	50	-
6.8	Octabromodiphenyl ether	mg/kg	ND	50	-
6.9	Nonabromodiphenyl ether	mg/kg	ND	50	-
6.10	Decabromodiphenyl ether	mg/kg	ND	50	-
	Phthalates				
7	Dibutyl phthalate (DBP)	mg/kg	ND	50	1000
8	Butyl benzyl phthalate (BBP)	mg/kg	ND	50	1000
9	Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	ND	50	1000
10	Diisobutyl Phthalates (DIBP)	mg/kg	ND	50	1000

Remarks:

1. 1mg/kg=0.0001%
2. LOQ = Limit of Quantification
3. ND = Not Detected, (Considered as <LOQ)
4. - = not regulated

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Test Method:

1. IEC 62321-5:2013, Cadmium by AAS.
2. IEC 62321-5:2013, Lead by AAS.
3. IEC 62321-4:2013, Mercury by AAS.
4. IEC 62321-7-1:2017, Hexavalent Chromium by Colorimetric Method using UV-Vis Spectrophotometer and/or with reference to IEC 62321-5:2013, determination of Total Chromium by AAS.
5. IEC 62321-12:2023, PBBs and PBDEs by GC-MS
6. IEC 62321-12:2023, phthalates by GC-MS.

Notes:

1. The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
2. http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP_ORG_ID,FSP_LANG_ID:1258637,25
3. Test has been performed as per client's request.
4. The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
5. If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
6. ▼= a. The Metals sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm^2. The sample coating is considered to contain Cr(VI)
   b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm^2). The coating is considered a non-Cr(VI) based coating
   c. The result between 0.10 µg/cm^2 and 0.13 µg/cm^2 is considered to be inconclusive - unavoidable coating variations may influence the determination
   Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing
7. On 31 Mar 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the RoHS Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
8. The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
9. The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
10. The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.
11. The Process flow for analysis mentioned as under are carried out & verified by authorized personnel.
12. * This indicates that the parameter is subcontracted to NABL accredited laboratory.

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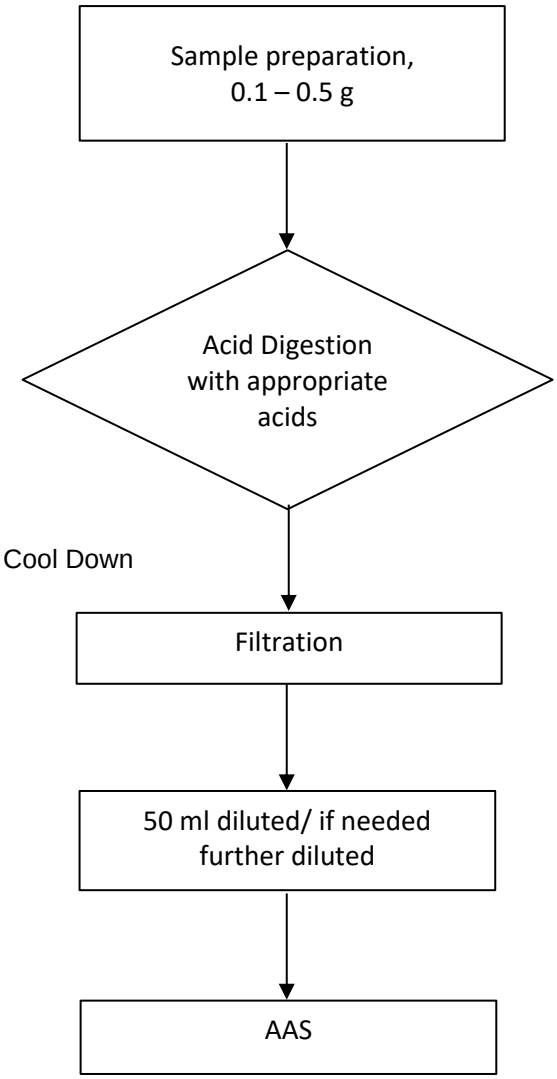
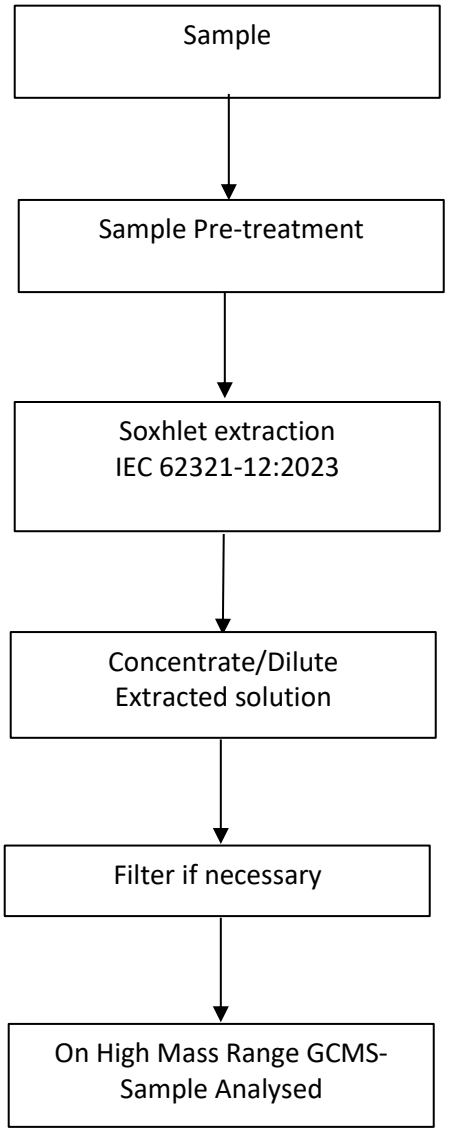
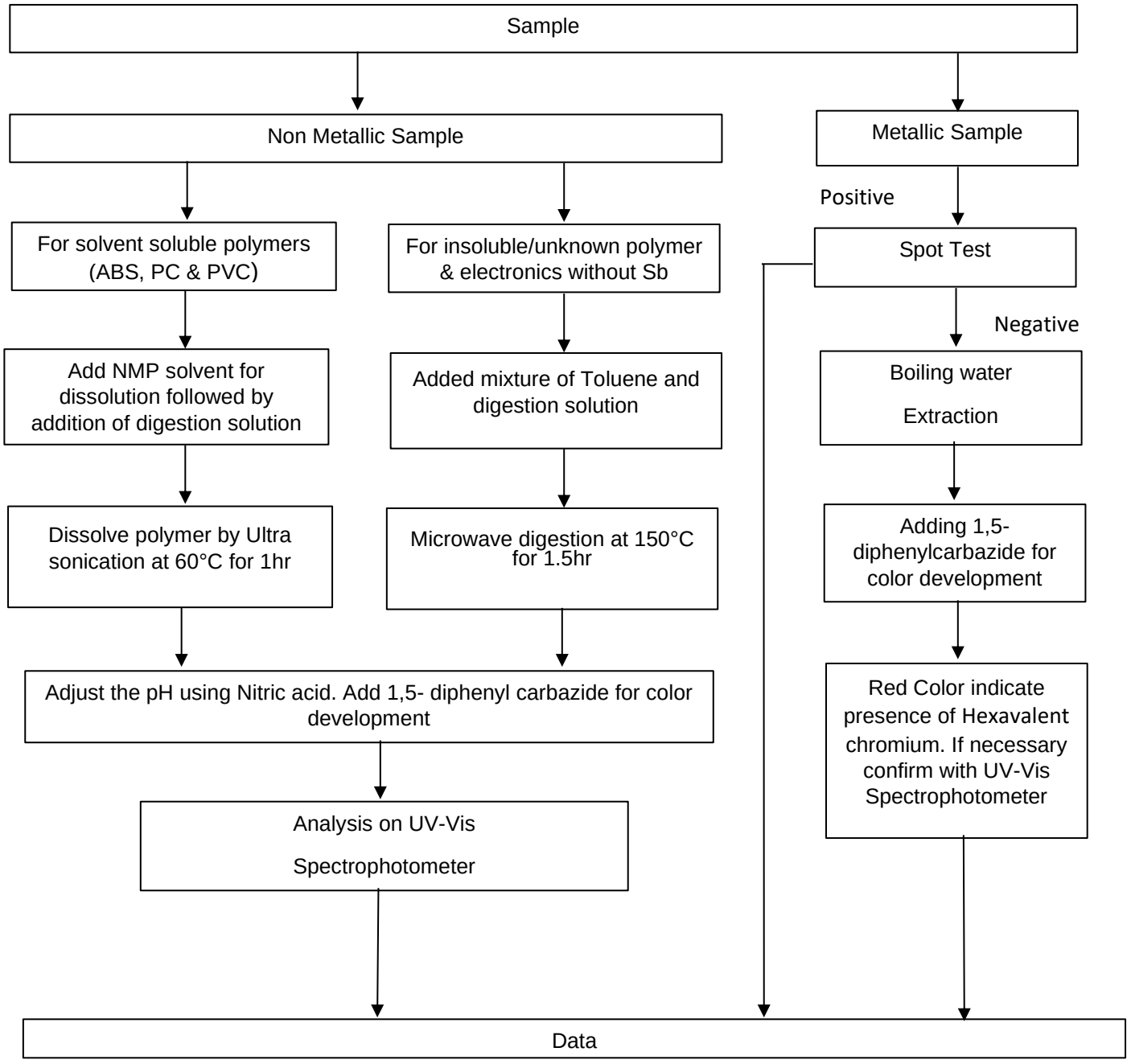
Process Flow for analysis of metal contents in plastics, metals and electronic components sample



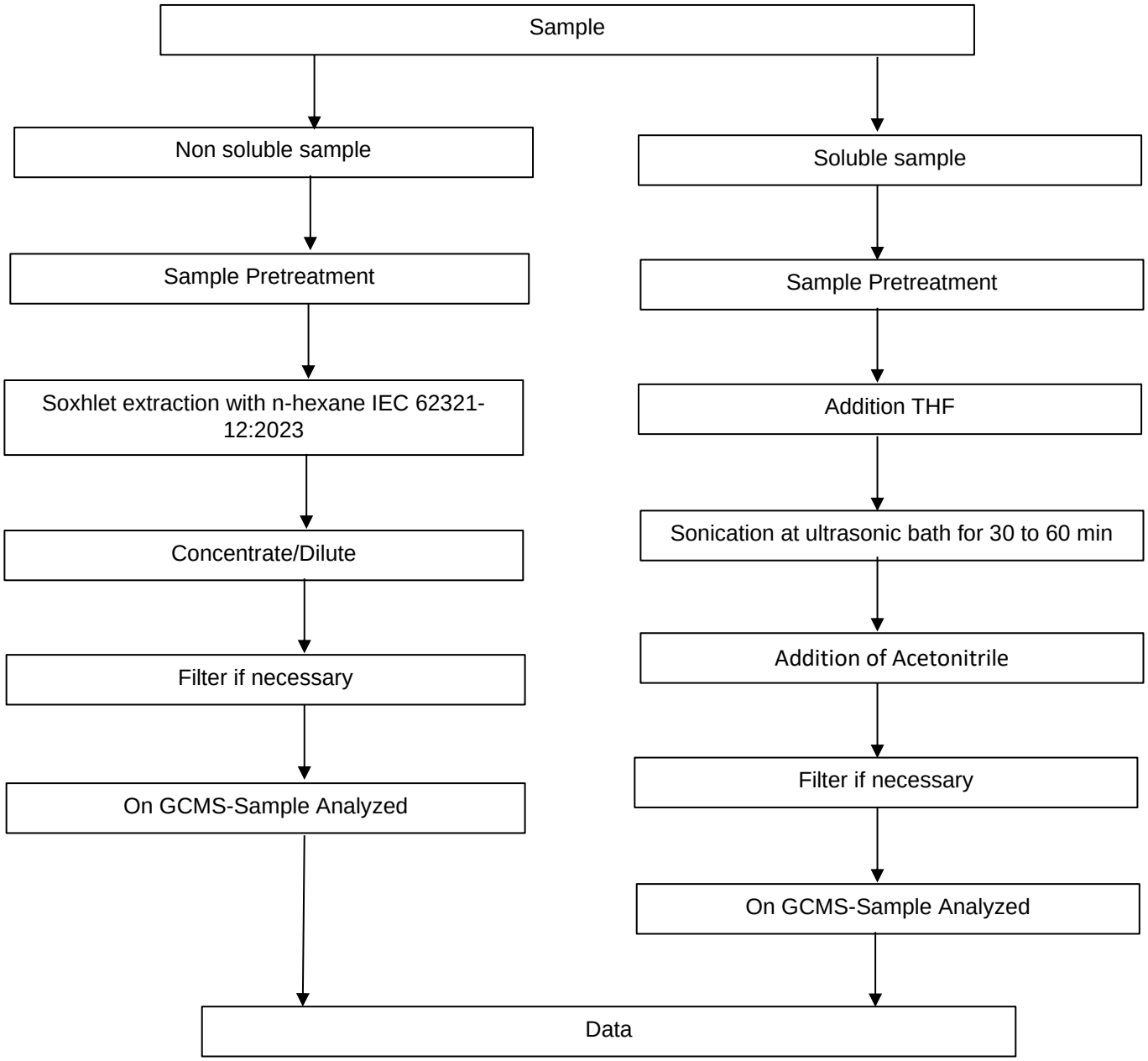
Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample



Process Flow for analysis of Hexavalent chromium contents in plastics, metals and electronic components sample



Process Flow for analysis of Phthalates using soxhlet Extraction or THF Extraction:



Sample image is authentic only for the original Test Report

TERM & CONDITIONS

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