



TEST REPORT

Technical Report

Date Received

(8722)204-0219

July 23, 2022

August 09, 2022

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Factory Company Name: SHAHI EXPORTS PVT LTD (UNIT-9)
Factory Address: 171, 7TH MAIN ROAD, INDUSTRIAL SUBURB BBMP WARD # 11
PEENYA 2ND STAGE, BANGALORE.
Project No.: /
Client Reference No.: /
Sampling Method: I001) Raw Wastewater – 6 hours - Time – weighted Composite
I002) Sludge – Grab
Sample Pick Up Date: July 22, 2022
Wastewater Discharge to: Others
On-Site Effluent Treatment Plant (ETP): Yes
Discharge Type: Zero Liquid Discharge
Off-site ETP name (if applicable): N/A
Off-site ETP address (if applicable): N/A
Local Regulation: / Ordinance / AW-328375
requirements related to wastewater discharged are followed:
Permit Validation Date: 30/09/2030
Parameters Exceeded Local Regulation: N/A
Legal compliance: N/A
Conventional Parameters: Foundational
Overall Category: Not Deducted
MRSL Parameter: Not Deducted
Test Period: July 23, 2022 – August 09, 2022

Sample Description:

I001) Light blue color liquid – Raw Wastewater
I002) Brown color Solid – Sludge

Parameters exceeded maximum holding time: N/A

Sample Number: 8F146509871

Certificate No. TC-6092 (Pls Refer the website www.nabl-india.org to view the scope of accreditation)

Bureau Veritas Consumer Products Services (I) Pvt. Ltd.
AKR Tech Park, Ground Floor,
C Block, Survey No 112,
BANGALORE
Tel: 0091-80-40701600 Fax: 0091-80-40701655

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

ULR-TC609222000043776



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REMARK

If there are questions or concerns on this report, please contact the following persons:

General enquiry and invoicing

Sunesh.nair@in.bureauveritas.com
080-40701621

Technical enquiry-Chemical

Sudalaimuthu.vs@in.bureauveritas.com
080-40701639

This report shown the test result of the auxiliary chemical and/or raw material samples, which collected during particular factory audit. The results of this report shall not be used for any regulatory compliance purposes.

* The sampling is agreed with client.

The NABL symbol is published only on the page/s having NABL accredited tests.

**BUREAU VERITAS CONSUMER PRODUCTS SERVICES (INDIA) PVT. LTD.
AUTHORIZED SIGNATORIES**

APPROVED BY :

P.Sugumar

Lab Manager - Analytical Services

PREPARED BY:

KP/MK

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Executive Summary

1A) Conventional Parameters	I001	I002
Temperature	NR	NR
TSS		
COD		
Total-N		
pH Value		
Color [m ⁻¹] (436nm; 525nm; 620nm)		
BOD ₅		
Ammonium-N		
Total-P		
AOX		
Oil and Grease		
Phenol		
Coliform		
Persistent Foam		
ANIONS - Cyanide		□
ANIONS - Sulfide		NR
ANIONS - Sulfite		
Dry mass (total solids)	NR	Refer Result
1B) Conventional Parameters – METALS	□	□

ZDHC MRSLS Substances	I001	I002
2A) APs and APEOs	ND	ND
2B) Chlorobenzenes and Chlorotoluenes	ND	ND
2C) Chlorophenols	ND	ND
2D) Azo Dyes	ND	ND
2E) Carcinogenic Dyes	ND	ND
2F) Disperse Dyes	ND	ND
2G) Flame Retardants	ND	ND
2H) Glycols	ND	ND
2I) Halogenated Solvents	ND	ND
2J) Organotin Compounds	ND	ND
2K) Perfluorinated and Polyfluorinated Chemicals	ND	ND
2L) Phthalates	ND	ND
2M) Poly Aromatic Hydrocarbons	ND	ND
2N) Volatile Organic Compounds	ND	ND

Note / Key :

- □ - Meet Foundational limit / Meet discharge license criteria
- ■ - Exceeding Foundational Limit / Exceeding discharge license criteria / Exceeding Reporting Limit
- D – Detected
- ND – Not Detected
- NR – Not Requested
- N/A – Not Applicable

Objective

The environment samples were tested for below parameters.

1B) Conventional Parameters – METALS
2A) APs and APEOs
2B) Chlorobenzenes and Chlorotoluenes
2C) Chlorophenols
2D) Azo Dyes
2E) Carcinogenic Dyes
2F) Disperse Dyes
2G) Flame Retardants
2H) Glycols
2I) Halogenated Solvents
2J) Organotin Compounds
2K) Perfluorinated and Polyfluorinated Chemicals
2L) Phthalates
2M) Poly Aromatic Hydrocarbons
2N) Volatile Organic Compounds
Table 3 Sludge parameter

Sampling Plan

Basically, two environment samples were sampled per factory, including 1) Raw wastewater and 2) Sludge. Total number of sample collected will be depended on the actual factory facilities and manufacturing processes.

Method of sampling used is time-weighted composite grab samples (agreed with client.). Composite sampling shall be performed for no less than six hours, with no more than one hour between discrete samples. Each discrete sample shall be of equal volume. Wastewater and freshwater samples should, as much as possible, be collected simultaneously, during the time that PU is in normal operation. The sampling shall aim to analyse the snapshot of water quality characteristics of the operating PU. Under no circumstance shall samples be taken during times when the production process is not running or the wastewater is diluted due to heavy rainfall, etc.

Remark :

- Sampling procedure is with reference to below standards:
 - 1) South Australia EPA Guidelines (June 2007), Regulatory Monitoring and Testing Water and Wastewater Sampling.
 - 2) Australia EPA (Victoria) Guideline (June 2009), Sampling and Analysis of Waters, Wastewaters, Soils and Wastes.
 - 3) ISO 5667-3:2003, Water Quality - Sampling - Part 3: Guidance on the Preservation and Handling of Water Samples.
 - 4) ASTM D3976-92 (Reapproved 2010), Standard Practice for Preparation of Sediment Samples for Chemical Analysis.
- Field data records are attached in Appendix C.



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Test Result

ANIONS - Cyanide

Test Method : Reference to ISO 6703-1,2, ISO 14403-1,2, US EPA 335.2, APHA 4500-CN, HJ 484

Tested Item(s)	Result	Unit	Conclusion
I002	ND	mg/kg	DATA

Note:

mg/kg = milligram per kilogram

Dry mass (total solids)

Test Method : Reference to US EPA 160.3 /209A

Tested Item(s)	Result	Unit	Conclusion
I002	76.38	%	DATA

% = % by mass

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1B) Conventional Parameters – METALS

Heavy Metals	I001 (mg/L)	I002 (mg/kg)
Antimony(Sb) Foundational Limit: 0.1 mg/L; Progressive Limit: 0.05 mg/L; Aspirational Limit: 0.01 mg/L	ND (Aspirational)	NR
Chromium(Cr), total Foundational Limit: 0.2 mg/L; Progressive Limit: 0.1 mg/L; Aspirational Limit: 0.05 mg/L	ND (Aspirational)	NR
Cobalt(Co) Foundational Limit: 0.05 mg/L; Progressive Limit: 0.02 mg/L; Aspirational Limit: 0.01 mg/L	ND (Aspirational)	NR
Copper(Cu) Foundational Limit: 1 mg/L; Progressive Limit: 0.5 mg/L; Aspirational Limit: 0.25 mg/L	0.192 (Aspirational)	NR
Nickel(Ni) Foundational Limit: 0.2 mg/L; Progressive Limit: 0.1 mg/L; Aspirational Limit: 0.05 mg/L	0.01 (Aspirational)	NR
Silver(Ag) Foundational Limit: 0.1 mg/L; Progressive Limit: 0.05 mg/L; Aspirational Limit: 0.005 mg/L	ND (Aspirational)	NR
Zinc(Zn) Foundational Limit: 5 mg/L; Progressive Limit: 1 mg/L; Aspirational Limit: 0.5 mg/L	2.351 (Foundational)	NR
Arsenic(As) Foundational Limit: 0.05 mg/L; Progressive Limit: 0.01 mg/L; Aspirational Limit: 0.005 mg/L	0.002 (Aspirational)	ND
Cadmium(Cd) Foundational Limit: 0.1 mg/L; Progressive Limit: 0.05 mg/L; Aspirational Limit: 0.01 mg/L	0.004 (Aspirational)	ND
Chromium VI(CrVI) Foundational Limit: 0.05 mg/L; Progressive Limit: 0.005 mg/L; Aspirational Limit: 0.001 mg/L	ND (Aspirational)	ND
Lead(Pb) Foundational Limit: 0.1 mg/L; Progressive Limit: 0.05 mg/L; Aspirational Limit: 0.01 mg/L	0.005 (Aspirational)	ND
Mercury(Hg) Foundational Limit: 0.01 mg/L; Progressive Limit: 0.005 mg/L; Aspirational Limit: 0.001 mg/L	ND (Aspirational)	ND



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Others Priority Chemical Groups

	I001 ($\mu\text{g/L}$)	I002 (mg/kg)
2A) APs and APEOs	ND	ND
2B) Chlorobenzenes and Chlorotoluenes	ND	ND
2C) Chlorophenols	ND	ND
2D) Azo Dyes	ND	ND
2E) Carcinogenic Dyes	ND	ND
2F) Disperse Dyes	ND	ND
2J) Organotin Compounds	ND	ND
2L) Phthalates	ND	ND
2M) Poly Aromatic Hydrocarbons	ND	ND

Remark :

- Test method, reporting limit and list of chemical are summarized in tables of Appendix B.
- ND = Not detected (Please refer to reporting limit shown in Appendix B.).
- All results are in ppb as unit.
- ppm = part(s) per million; ppb = part(s) per billion; mg/kg = milligram per kilogram



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Others Priority Chemical Groups

2G) Flame Retardants	ND	ND
2H) Glycols	ND	ND
2I) Halogenated Solvents	ND	ND
2K) Perfluorinated and Polyfluorinated Chemicals	ND	ND
2N) Volatile Organic Compounds	ND	ND

Remark :

- Test method, reporting limit and list of chemical are summarized in tables of Appendix B.
- ND = Not detected (Please refer to reporting limit shown in Appendix B.).
- All results are in ppb as unit.
- ppm = part(s) per million; ppb = part(s) per billion; mg/kg = milligram per kilogram

APPENDIX A - Photo of the Sample/ Sampling Location

I001) Sampling Point
13°01'27.6"N 77°31'40.8"E



I001) Sampling Point Surrounding Environment
13°01'27.6"N 77°31'40.8"E



I001) All sampled bottles with label



I001) pH value



I001) Sample for Phthalate Testing



I001) Packaging



I002) Sampling Point
13°01'27.8"N 77°31'40.9"E



I002) Sampling Point Surrounding Environment
13°01'27.8"N 77°31'40.9"E



I002) All sampled bottles with label



I002) Sample for Phthalate Testing



I002) Packaging



APPENDIX B

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
2A. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	Nonylphenol NP, mixed isomers	Various (incl. 104-40-5, 11066-49-2, 25154-52-3, 84852-15-3)	5	0.4	NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC/MS or LC/MS(-MS)) OPEO/NPEO: ISO18857-2 or ASTM D7065(LC/MS; GC/MS or LC/MSMS for n=1,2) APEO 1-18
	Octylphenol OP, mixed isomers	Various (incl. 140-66-9, 1806-26-4, 27193-28-8)	5	0.4	
	Octylphenol ethoxylates (OPEO)	Various (incl. 9002-93-1, 9036-19-5, 68987-90-6)	5	0.4	
	Nonylphenol ethoxylates (NPEO)	Various (incl. 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0)	5	0.4	
2B. Chlorobenzenes and Chlorotoluenes	Monochlorobenzene	108-90-7	0.2	0.2	USEPA 8260B,8270D. Dichloromethane extraction followed by GC/MS
	1,2-Dichlorobenzene	95-50-1	0.2	0.2	
	1,3-Dichlorobenzene	541-73-1	0.2	0.2	
	1,4-Dichlorobenzene	106-46-7	0.2	0.2	
	1,2,3-Trichlorobenzene	87-61-6	0.2	0.2	
	1,2,4-Trichlorobenzene	120-82-1	0.2	0.2	
	1,3,5-Trichlorobenzene	108-70-3	0.2	0.2	
	1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	0.2	
	1,2,3,5-Tetrachlorobenzene	634-90-2	0.2	0.2	
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	0.2	
	Pentachlorobenzene	608-93-5	0.2	0.2	
	Hexachlorobenzene	118-74-1	0.2	0.2	
	2-Chlorotoluene	95-49-8	0.2	0.2	
	3-Chlorotoluene	108-41-8	0.2	0.2	
	4-Chlorotoluene	106-43-4	0.2	0.2	
	2,3-Dichlorotoluene	32768-54-0	0.2	0.2	
	2,4-Dichlorotoluene	95-73-8	0.2	0.2	
	2,5-Dichlorotoluene	19398-61-9	0.2	0.2	
	2,6-Dichlorotoluene	118-69-4	0.2	0.2	
	3,4-Dichlorotoluene	95-75-0	0.2	0.2	
	3,5-Dichlorotoluene	25186-47-4	0.2	0.2	
	2,3,4-Trichlorotoluene	7359-72-0	0.2	0.2	
	2,3,6-Trichlorotoluene	2077-46-5	0.2	0.2	
	2,4,5-Trichlorotoluene	6639-30-1	0.2	0.2	
	2,4,6-Trichlorotoluene	23749-65-7	0.2	0.2	
	3,4,5-Trichlorotoluene	21472-86-6	0.2	0.2	
	2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	0.2	
	2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	0.2	
	2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	0.2	
	Pentachlorotoluene	877-11-2	0.2	0.2	
2C. Chlorophenols	2-Chlorophenol	95-57-8	0.5	0.05	USEPA 8270 D Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC/MS
	3-Chlorophenol	108-43-0	0.5	0.05	
	4-Chlorophenol	106-48-9	0.5	0.05	
	2,3-Dichlorophenol	576-24-9	0.5	0.05	
	2,4-Dichlorophenol	120-83-2	0.5	0.05	
	2,5-Dichlorophenol	583-78-8	0.5	0.05	
	2,6-Dichlorophenol	87-65-0	0.5	0.05	
	3,4-Dichlorophenol	95-77-2	0.5	0.05	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	3,5-Dichlorophenol	591-35-5	0.5	0.05	
	2,3,4-Trichlorophenol	15950-66-0	0.5	0.05	
	2,3,5-Trichlorophenol	933-78-8	0.5	0.05	
	2,3,6-Trichlorophenol	933-75-5	0.5	0.05	
	2,4,5-Trichlorophenol	95-95-4	0.5	0.05	
	2,4,6-Trichlorophenol	88-06-2	0.5	0.05	
	3,4,5-Trichlorophenol	609-19-8	0.5	0.05	
	2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	0.05	
	2,3,4,6-Tetrachlorophenol	58-90-2	0.5	0.05	
	2,3,5,6-Tetrachlorophenol	935-95-5	0.5	0.05	
	Pentachlorophenol (PCP)	87-86-5	0.5	0.05	
2D. Dyes - Azo (Forming Restricted Amines)	4,4'-Methylene-bis-(2-chloro-aniline)	101-14-4	0.1	0.2	EN 14362. Reduction step with Sodiumdithionite, solvent extraction, GC/MS or LC/MS
	4,4'-methylenedianiline	101-77-9	0.1	0.2	
	4,4'-Oxydianiline	101-80-4	0.1	0.2	
	4-Chloroaniline	106-47-8	0.1	0.2	
	3,3'-Dimethoxybenzidine	119-90-4	0.1	0.2	
	3,3'-Dimethylbenzidine	119-93-7	0.1	0.2	
	6-methoxy-m-toluidine (p-Cresidine)	120-71-8	0.1	0.2	
	2,4,5-Trimethylaniline	137-17-7	0.1	0.2	
	4,4'-Thiodianiline	139-65-1	0.1	0.2	
	4-Aminoazobenzene	60-09-3	0.1	0.2	
	4-Methoxy-m-phenylenediamine	615-05-4	0.1	0.2	
	4,4'-Methylene-di-o-toluidine	838-88-0	0.1	0.2	
	2,6-Xylidine	87-62-7	0.1	0.2	
	o-Anisidine	90-04-0	0.1	0.2	
	2-Naphthylamine	91-59-8	0.1	0.2	
	3,3'-Dichlorobenzidine	91-94-1	0.1	0.2	
	4-Aminodiphenyl	92-67-1	0.1	0.2	
	Benzidine	92-87-5	0.1	0.2	
	o-Toluidine	95-53-4	0.1	0.2	
	2,4-Xylidine	95-68-1	0.1	0.2	
	4-Chloro-o-toluidine	95-69-2	0.1	0.2	
	4-Methyl-m-phenylenediamine	95-80-7	0.1	0.2	
	o-Aminoazotoluene	97-56-3	0.1	0.2	
	5-nitro-o-toluidine	99-55-8	0.1	0.2	
2E. Dyes- Carcinogenic or Equivalent Concern	C.I. Direct Black 38	1937-37-7	500	10	Liquid Extraction LC/MS
	C.I. Direct Blue 6	2602-46-2	500	10	
	C.I. Acid Red 26	3761-53-3	500	10	
	C.I. Basic Red 9	569-61-9	500	10	
	C.I. Direct Red 28	573-58-0	500	10	
	C.I. Basic Violet 14	632-99-5	500	10	
	C.I. Disperse Blue 1	2475-45-8	500	10	
	C.I. Disperse Blue 3	2475-46-9	500	10	
	C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	500	10	
	C.I. Basic Green 4 (malachite green chloride)	569-64-2	500	10	
	C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	500	10	
	C.I. Basic Green 4 (malachite green)	10309-95-2	500	10	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	Disperse Orange 11	82-28-0	500	10	
2F. Dyes-disperse (sensitizing)	Disperse Yellow 1	119-15-3	50	2	Liquid Extraction LC/MS
	Disperse Blue 102	12222-97-8	50	2	
	Disperse Blue 106	12223-01-7	50	2	
	Disperse Yellow 39	12236-29-2	50	2	
	Disperse Orange 37/59/76	13301-61-6	50	2	
	Disperse Brown 1	23355-64-8	50	2	
	Disperse Orange 1	2581-69-3	50	2	
	Disperse Yellow 3	2832-40-8	50	2	
	Disperse Red 11	2872-48-2	50	2	
	Disperse Red 1	2872-52-8	50	2	
	Disperse Red 17	3179-89-3	50	2	
	Disperse Blue 7	3179-90-6	50	2	
	Disperse Blue 26	3860-63-7	50	2	
	Disperse Yellow 49	54824-37-2	50	2	
	Disperse Blue 35	12222-75-2	50	2	
	Disperse Blue 124	61951-51-7	50	2	
	Disperse Yellow 9	6373-73-5	50	2	
	Disperse Orange 3	730-40-5	50	2	
	Disperse Blue 35	56524-77-7	50	2	
2G. Flame Retardants	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	5	1	ISO 22032, USEPA527 and USEPA8321B. Dichloromethane extraction GC/MS or LC/MS(-MS)
	Decabromodiphenyl ether (DecaBDE)	1163-19-5	5	1	
	Tris(2,3-dibromopropyl) phosphate (TRIS/TDBPP)	126-72-7	5	1	
	Pentabromodiphenyl ether (PentaBDE)	32534-81-9	5	1	
	Octabromodiphenyl ether (OctaBDE)	32536-52-0	5	1	
	Bis(2,3-dibromopropyl) phosphate (BIS/BDBPP)	5412-25-9	5	1	
	Tris(aziridinyl)-phosphineoxide (TEPA)	545-55-1	5	1	
	Polybromobiphenyls (PBBs)	59536-65-1	5	1	
	Tetrabromobisphenol A (TBBPA)	79-94-7	5	1	
	Hexabromocyclododecane (HBCDD)	3194-55-6	5	1	
	2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	5	1	
	Tris(1,3-dichloroisopropyl) phosphate (TDCP)	13674-87-8	5	1	
	Short chain chlorinated paraffins (SCCPs) (C10-C13)	85535-84-8	5	1	
2H. Glycols	Bis(2-methoxyethyl)-ether	111-96-6	50	10	US EPA 8270 Liquid Extraction LC/MS
	2-ethoxyethanol	110-80-5	50	10	
	2-ethoxyethyl acetate	111-15-9	50	10	
	Ethylene glycol dimethyl ether	110-71-4	50	10	
	2-methoxyethanol	109-86-4	50	10	
	2-methoxyethylacetate	110-49-6	50	10	
	2-methoxypropylacetate	70657-70-4	50	10	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	Triethylene glycol dimethyl ether	112-49-2	50	10	
2I. Halogenated Solvents	1,2-Dichloroethane	107-06-2	1	2	USEPA 8260B Headspace GC/MS or Purgeand-Trap-GC/MS
	Methylene Chloride	75-09-2	1	2	
	Trichloroethylene	79-01-6	1	2	
	Tetrachloroethylene	127-18-4	1	2	
2J. Organotin Compounds	Mono-, di- and tri-methyltin derivatives	Multiple	0.01	0.2	ISO 17353 Derivatisation with NaB(C2H5) GC/MS
	Mono-, di- and tri-butyltin derivatives	Multiple	0.01	0.2	
	Mono-, di- and tri-phenyltin derivatives	Multiple	0.01	0.2	
	Mono-, di- and tri-octyltin derivatives	Multiple	0.01	0.2	
	Monomethyltin	Multiple	0.01	0.2	
	Dimethyltin	Multiple	0.01	0.2	
	Trimethyltin	Multiple	0.01	0.2	
	Monobutyltin	Multiple	0.01	0.2	
	Dibutyltin	Multiple	0.01	0.2	
	Tributyltin	Multiple	0.01	0.2	
	Monophenyltin	Multiple	0.01	0.2	
	Diphenyltin	Multiple	0.01	0.2	
	Triphenyltin	Multiple	0.01	0.2	
	Monooctyltin	Multiple	0.01	0.2	
	Diocetyl tin	Multiple	0.01	0.2	
	Triocetyl tin	Multiple	0.01	0.2	
2K. Perfluorinated and Polyfluorinated Chemicals (PFCs)	Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.01	0.10	DIN 38407-42 (modified) Ionic PFC: Concentration or direct injection, LC/MS(-MS); Non-ionic PFC (FTOH): derivatisation with acetic anhydride, followed by GC/MS
	Perfluoro-n-octanoic acid (PFOA)	335-67-1	0.01	0.10	
	Perfluorobutanesulfonic acid (PFBS)	29420-49-3, 29420-43-3	0.01	0.10	
	Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	0.01	0.10	
	8:2 FTOH	678-39-7	1	1	
	6:2 FTOH	647-42-7	1	1	
2L. Phthalates (including all other esters of phthalic acid)	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	10	2	US EPA 8270D, ISO 18856 Dichloromethane extraction GC/MS
	Dimethoxyethyl phthalate (DMEP)	117-82-8	10	2	
	Di-n-octyl phthalate (DNOP)	117-84-0	10	2	
	Di-iso-decyl phthalate (DIDP)	26761-40-0	10	2	
	Di-iso-nonyl phthalate (DINP)	28553-12-0	10	2	
	Di-n-hexyl phthalate (DnHP)	84-75-3	10	2	
	Dibutyl phthalate (DBP)	84-74-2	10	2	
	Butyl benzyl phthalate (BBP)	85-68-7	10	2	
	Dinonyl phthalate (DNP)	84-76-4	10	2	
	Diethyl phthalate (DEP)	84-66-2	10	2	
	Di-n-propyl phthalate (DPRP)	131-16-8	10	2	
	Di-iso-butyl phthalate	84-69-5	10	2	

Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
	(DIBP)				
	Di-cyclohexyl phthalate (DCHP)	84-61-7	10	2	
	Di-iso-octyl phthalate (DIOP)	27554-26-3	10	2	
	1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4	10	2	
	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	10	2	
2M. Poly Aromatic Hydrocarbons (PaHs)	Benzo[a]pyrene (BaP)	50-32-8	1	0.2	DIN 38407-39 Solvent extraction GC/MS
	Anthracene	120-12-7	1	0.2	
	Pyrene	129-00-0	1	0.2	
	Benzo[ghi]perylene	191-24-2	1	0.2	
	Benzo[e]pyrene	192-97-2	1	0.2	
	Indeno[1,2,3-cd]pyrene	193-39-5	1	0.2	
	Benzo[j]fluoranthene	205-82-3	1	0.2	
	Benzo[b]fluoranthene	205-99-2	1	0.2	
	Fluoranthene	206-44-0	1	0.2	
	Benzo[k]fluoranthene	207-08-9	1	0.2	
	Acenaphthylene	208-96-8	1	0.2	
	Chrysene	218-01-9	1	0.2	
	Dibenz[a,h]anthracene	53-70-3	1	0.2	
	Benzo[a]anthracene	56-55-3	1	0.2	
	Acenaphthene	83-32-9	1	0.2	
	Phenanthrene	85-01-8	1	0.2	
	Fluorene	86-73-7	1	0.2	
	Naphthalene	91-20-3	1	0.2	
2N. Volatile Organic Compound (VOCs)	Benzene	71-43-2	1	2	ISO 11423-1 Headspace- or Purge-and-Trap-GC/MS
	Xylene	1330-20-7	1	2	
	o-cresol	95-48-7	1	2	
	p-cresol	106-44-5	1	2	
	m-cresol	108-39-4	1	2	
1A. Conventional Parameters	Temperature	—	N/A	N/A	Apply the standard methods that best apply to the region (ISO, EU, US, China), please refer to ZDHC Wastewater Guidelines for more details on the testing method and the levels (Foundational, Progressive, and Aspirational). Cyanide: With reference to APHA 4500 CN—B,C&E and followed by UV analysis
	TSS	—	N/A	N/A	
	COD	—	N/A	N/A	
	Total-N	—	N/A	N/A	
	pH	—	N/A	N/A	
	Color [m ⁻¹] (436nm; 525nm; 620nm)	—	N/A	N/A	
	BOD5	—	N/A	N/A	
	Ammonium-N	—	N/A	N/A	
	Total-P	—	N/A	N/A	
	AoX	—	N/A	N/A	
	Oil and Grease	—	N/A	N/A	
	Phenol	—	N/A	N/A	
	Coliform(bacteria/100ml)	—	N/A	N/A	
	Persistent Foam	—	Not visible	Not visible	
	ANIONS				
	Cyanide(CN-)	Various (incl. 57-12-5)	0.02	1	
	Sulfide	—	N/A	N/A	
	Sulfite	—	N/A	N/A	



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Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (ug/L)/(ppb)	Sludge (mg/kg)/(ppm)	
Group	Substance (Testing parameter)	CAS No.	Report Limit		Name of the testing method
			Wastewater (mg/L) / (ppm)	Sludge (mg/kg) / (ppm)	
1B. Conventional Parameters - METALS	Antimony(Sb)	7440-36-0	0.001	N/A	Various Acid Digestion with ICP analysis please refer to ZDHC Wastewater Guidelines for more details on the testing method and the levels (Foundational, Progressive, and Aspirational). Cr(VI): Various Solvent extraction and derivatisation followed by UV analysis
	Chromium(Cr), total	7440-47-3	0.001	N/A	
	Cobalt(Co)	7440-48-4	0.001	N/A	
	Copper(Cu)	7440-50-8	0.001	N/A	
	Nickel(Ni)	7440-02-0	0.001	N/A	
	Silver(Ag)	7440-22-4	0.001	N/A	
	Zinc(Zn)	7440-66-6	0.001	N/A	
	Arsenic(As)	7440-38-2	0.001	2	
	Cadmium(Cd)	7440-43-9	0.0001	2	
	Chromium VI(CrVI)	18540-29-9	0.001	2	
	Lead(Pb)	7439-92-1	0.001	2	
	Mercury(Hg)	7439-97-6	0.00005	0.2	
3. Conventional Parameters	Dry mass (total solids)	—	N/A	N/A	US EPA 160.3 / 209A

Note / Key :

ppm = part(s) per million; ppb = part(s) per billion
U. S. EPA = United States Environmental Protection Agency
APHA = American Public Health Association



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APPENDIX C – Onsite Field Data Record Sheet

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 13
		Business Line: Analytical

General Data

Laboratory Sample Number: (8722)204-0219
 Client Name: _____
 Field Contact Person: Mr. Abdul Nazeer Phone No: 9844950519
 Project (Facility Name and Address): SHAH EXPORTS PVT. LTD - unit-9 11 peenya 2nd Stage Bangalore
 Sampling Location / Description: Raw waste water
 Sample Identification: Zero discharge with sampling plan
 Sample Type: Composite Sample / Grab sample (Please delete as appropriate)
 Name of Sampler: M. KOPPAKRISHNAN
 Discharge mode: Direct discharge to environment (Specify destination: River, Sea, Stream...) OR Indirect discharge to sewage treatment plant ZLD plant
 Date of collection: 22/07/2022
 Factory Type: Dyeing / Printing / Washing / Finishing / Others (please specify): _____
 *Note: It would be selected more than one

Field Data for Wastewater

Field Data for Wastewater									
Arrival Time:		10.10 am			Departure Time:		3.40 pm		
Field Parameters		pH: 6.8			Temp: 32.1 °C		Color: light blue		Flow rate: 62.75 (volume/min)
Control No. of field equipment									
Factory with effluent treatment plant:					Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>		
Sample matrix:		Incoming water (If required)							
		Wastewater before treatment							
		Wastewater after treatment – water at discharge point							
Sampler container number									
		1	2	3	4	5	6	7	8
Recording time	ID								
	Time	10.20 AM	11.20 AM	12.20 pm	1.20 pm	2.20 pm	3.20 pm		
pH :		6.8	6.9	6.8	6.6	6.8	6.9		
Temp (°C) :		32°	33°	32°	33°	32	31°		
Color (visual estimation):		light blue	light blue	light blue	white	light blue	light blue		
Flow rate (volume/time)		62.12 m³/h	63.15 m³/h	62.05 m³/h	62.43 m³/h	62.18 m³/h	63.98 m³/h		
Volume collected, mL		1000 ml	1000 ml	1000 ml	1000 ml	1000 ml	1000 ml		
Total volume collected		Remark: Total volume collected must be greater than total of sample size required							

Analysis Required and Preservation Method

Tests (ZDHC MRSL Parameters)	Test required (v)	Total of sample size	Type of container	Preservation method
Combined test or Individual test (Remark 4)	1. Phthalate	1000 mL total or 1000 mL each	Amber Glass, washed with nitric acid, rinsed thoroughly with distilled water and dried before use	Without adding acid Store sample at 6°C
	2. Chlorobenzenes, Chlorotoluene & PAH			
	3. SCCPs			
	4. APS			
5. APEOs	<input checked="" type="checkbox"/>	100 mL		
6. Chlorophenols & Cresols	<input checked="" type="checkbox"/>	100 mL		
7. Flame retardant	<input checked="" type="checkbox"/>	500 mL		
8. Dyes	<input checked="" type="checkbox"/>	10 mL		
9. Glycol	<input checked="" type="checkbox"/>	50 mL		
10. *Pesticides	<input checked="" type="checkbox"/>	1000 mL		
11. *Nitrosamine	<input checked="" type="checkbox"/>	10 mL		
12. Banned Azodyes	<input checked="" type="checkbox"/>	2000 mL		
13. *Free primary aromatic amines	<input checked="" type="checkbox"/>	500 mL	Amber Glass, washed with nitric acid	Acidify to pH 2 with HCl and store sample at 6°C
14. Organotin Compounds	<input checked="" type="checkbox"/>	500 mL		Fill to full container without air gap, acidify to pH 2 with HCl and store sample at 6°C
15. VOC & Halogenated Solvents (Remark 6)	<input checked="" type="checkbox"/>	10 mL		
16. PFCs	<input checked="" type="checkbox"/>	2 mL	PE, washed with pesticide grade Acetone	Without adding acid Store sample at 6°C



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FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)				CPSD-AN-00613-DATA 04	
				Issue Date:	
				Version No.: 13	
				Business Line: Analytical	
Tests (Conventional Parameters)	Test required (V)	Total of sample size	Type of container	Preservation method	
Combined test or Individual test (Remark 4)	17. Total suspended solids (TSS)	2000 mL total	Amber Glass, washed with nitric acid, rinsed thoroughly with distilled water and dried before use	Without adding acid Store sample at 6°C	
	18. *Total dissolved solids (TDS)	2000 mL each			
19. 5-day Biochemical Oxygen Demand (BOD5)	X	1000 mL			
20. Heavy Metals except Cr(VI) & Total-P (Remark 6)	✓	9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO ₃ and store at 6°C	
21. Cr(VI)	✓	95 mL	Amber Glass, washed with pesticide grade acetone	Filter by 0.45µm filter in field, fill to full container without air gap; adjust pH to 9.0-9.5 by adding ammonium buffer. Store sample at 6°C	
22. Cyanide	X	500 mL		Adjust pH 12 with 50% NaOH, add 0.05 mL of 10% Na ₂ S ₂ O ₃ and store sample at 6°C	
23. Chemical oxygen demand (COD)	X	150 mL	Amber Glass; washed with nitric acid	Acidify to pH 2 with H ₂ SO ₄ Store sample at 6°C	
24. Phenols	X	500 mL		Fill to full container without air gap; acidify to pH 2 with H ₂ SO ₄ and store sample at 6°C	
25. *Formaldehyde	X	25 mL			
26. Sulfide (Remark 5)	X	50 mL	PE, washed with pesticide grade Acetone;	Fill to full container without air gap; add 2 drops of 2M zinc acetate, adjust pH to 9 with 6M NaOH Store sample at 6°C	
27. Adsorbable organically bound halogens (AOX)	X	100 mL	Amber Glass, washed with nitric acid	Add 0.05 mL of 10% Na ₂ S ₂ O ₃ , acidify to pH 2 with H ₂ SO ₄ . Store sample at 6°C	
28. Total Coliform (Remark 6)	X	125 mL	PE, clean, sterile, non-reactive	Add 0.05 mL of 10% Na ₂ S ₂ O ₃ . Store sample at 6°C	
29. Persistent foam	X	N.A.	Foam higher than 45 cm (visual estimation): Yes / No		
30. Sulfite	X	100 mL	Amber Glass, washed with pesticide grade acetone	Add 1mL of 2.5% EDTA, 0.5g zinc acetate Store sample at 6°C	
31. Total-N	X	100 mL	Amber Glass with wide-mouth PTFE lid; washed with nitric acid;	Acidify to pH 2 with H ₂ SO ₄ Store sample at 6°C	
32. Ammonium-N	X	500 mL			
33. Oil and Grease & Total Hydrocarbon	X	1000 mL	Amber Glass; washed with nitric acid;	Acidify to pH 2 with HCl Store sample at 6°C	
34. Luminus Bacteria Toxicity	X	1000 mL	Amber Glass, washed with nitric acid, rinsed thoroughly with distilled water and dried before use	Without adding acid Store sample at 6°C	
35. Sulphate	X	100 mL			
36. Chloride	X	100 mL			
37. Color	X	100 mL			
38. Others:	X				

Observation/ Remark:

***Remarks:**

- Individual sampling can be performed upon request
- The minimum sampling time for 2016 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
- Scope of ZDHC guideline: Parameter 1, 2, 4-9, 12, 14-17, 19-24, 26-33
Scope of synthetic leather industry: Parameter 1, 2, 4-9, 12, 14-17, 19-33
Scope of MMCF: Parameter 4, 5, 15, 17, 19-21, 23, 24, 26, 27, 31-34, 37
Free primary aromatic amine, pesticides, nitrosamine and TDS are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G00019-STIP01, locations with those CPSD test capability inside TCD matrix can perform the combined test.
- Refer to CPSD-AN-000570-MTHD for additional pretreatment of sulfide if only dissolved sulfide is required to be tested.
- Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

Recorded by:

M. Gopalakrishnan
Full name:

Date:

22/07/2022

Comment from factory

Acknowledgement by factory

I hereby confirmed that Bureau Veritas has completed the stated sampling activity at captioned date, time and location. All sample(s) is/are collected in designated container(s) and without any observation in leakage. Sample(s) collected by Bureau Veritas is/are stored in portable freezer / fridge that is maintained in 1-6°C

Signatory of Factory Representative:

sdfd

Full Name:

ABDUL NAZEER

Date:

22/07/2022




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	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 13
		Business Line: Analytical

General Data

Laboratory Sample Number:

(8722)204-0219

Client Name:

Field Contact Person:

MR. ABDUL NAZEER

Phone No: 9844950519

Project (Facility Name and Address):

SHANT EXPORTS PVT. LTD-9 II Peelra 2nd Stage Bangalore

Sampling Location / Description:

Sludge

Sample Identification:

Zero discharge with sampling plan

Sample Type:

Composite Sample / Grab Sample (Please delete as appropriate)

Name of Sampler:

M. GOPALA KRISHNAN

Discharge mode:

Direct discharge to environment (Specify destination: River, Sea, Stream...) OR Indirect discharge to sewage treatment plant

ZLD Plant

Date of collection:

22/07/2022

Factory Type:

Dyeing / Printing / Washing / Finishing / Others (please specify):

*Note: It would be selected more than one

Field Data for Sludge

Arrival Time:	10:10 AM	Departure Time:	3:40 PM
Field Parameters	pH:	Temp: °C	Color: brown
Control No. of field equipment			

Analysis Required and Preservation Method

Factory with effluent treatment plant		Yes <input checked="" type="checkbox"/>		No							
Sample matrix		<input checked="" type="checkbox"/>		Sludge in clarifier (sedimentation tank)							
Sampler container number		4									
Recording time		02:00 PM									
Tests (MRSL Parameter)		Test required (v)	Total of sample size	Type of container		Preservation method					
Combined test or Individual test (Remark 3)	1. Phthalate	<input checked="" type="checkbox"/>	10g total or 10g each	Amber Glass, washed with nitric acid		Fill to full bottle without any air gap and store at 6°C					
	2. Chlorobenzenes, Chlorotoluene & PAHs	<input checked="" type="checkbox"/>									
	3. SCCPs	<input checked="" type="checkbox"/>									
	4. APS	<input checked="" type="checkbox"/>									
5. APEOs		<input checked="" type="checkbox"/>	20 g								
6. Chlorophenols & Cresols		<input checked="" type="checkbox"/>	20 g								
7. Flame retardant		<input checked="" type="checkbox"/>	10 g								
8. Dyes		<input checked="" type="checkbox"/>	10 g								
9. Glycols		<input checked="" type="checkbox"/>	100 g								
10. *Pesticides		<input checked="" type="checkbox"/>	20g								
11. Banned Azodyes		<input checked="" type="checkbox"/>	20 g								
12. *Free primary aromatic amines		<input checked="" type="checkbox"/>	10 g								
13. Organotin Compounds		<input checked="" type="checkbox"/>	10 g								
14. VOC & Halogenated Solvents		<input checked="" type="checkbox"/>	10 g	Amber Glass, wash with pesticide grade acetone		Fill to full container without any air gap and acid add and store at 6°C					
15. PFCs		<input checked="" type="checkbox"/>	10 g	PE, wash with pesticide grade acetone		Fill to full bottle without any air gap and store at 6°C					
Tests (Conventional Parameters)		Test required (v)	Total of sample size	Type of container		Preservation method					
16. Heavy Metals except Cr(VI)		<input checked="" type="checkbox"/>	0.2 g	PE, wash with nitric acid		Fill to full bottle without any air gap and store at 6°C					
17. Cr(VI)		<input checked="" type="checkbox"/>	2.5 g	Amber Glass, wash with pesticide grade acetone		Fill to full container without any air gap and acid add and store at 6°C					
18. Adsorbable organically bound halogens (AOX)		<input checked="" type="checkbox"/>	1 g								
19. Extractable organochlorides (EOX)		<input checked="" type="checkbox"/>	20 g								
20. Total organic carbon (TOC)		<input checked="" type="checkbox"/>	20 g								
21. Cyanide		<input checked="" type="checkbox"/>	50 g			Fill to full container without any air gap and adjust pH 12 with 50% NaOH and store at 6°C					
22. Others (Y: Solid)		<input checked="" type="checkbox"/>									
Observation/ Remark:											

***Remarks:**

1. Individual sampling can be performed upon request

2. Scope of ZDHC guideline Parameter 1, 2, 4-9, 11, 13-17, 21

Scope of synthetic leather industry: Parameter 1, 2, 4-9, 11, 13-17, 21

Scope of MMCF: Parameter 16, 18-20

Free primary aromatic amine and pesticides are not in the scope of ZDHC Guideline, they are tested upon request.

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APPENDIX D – Limitation Value of Legal Requirements

N/A

-END-