



Date of sampling	05/09/2025
Reporting date	11/09/2025

Audit ID	31564	Audit firm	SGS INDIA PVT. LTD.,
Company name	SHAHI EXPORTS PVT LTD.,		
Contact person	DHANUSREE M S		
Type of tax – tax ID no	GSTIN - 29AAJCS1175L1ZU		
Address	UNIT 105, #156, KIADB INDUSTRIAL AREA, NIDIGE, MACHENAHALLI - SHIMOGGA - 52277		
Region state province	KARNATAKA		
Town city / village	SHIMOGGA		
Zip / Post code	522777		

Type of wastewater discharge	
Type of wastewater discharge	Zero Liquid Discharge (ZLD)
Description of the discharge	--
[If direct discharge] Temperature of receiving water body:	--

Type of sludge disposal pathway	
Type of sludge disposal pathway	Pathway B: Landfill with Significant Control Measures

Type of treatment*	
PRELIMINARY	<input type="checkbox"/> Screening/Sieving/Grit remover (< 6 mm) <input type="checkbox"/> Screening/Sieving/Grit remover (≥ 6 mm) <input checked="" type="checkbox"/> Homogenization tank <input checked="" type="checkbox"/> pH correction <input type="checkbox"/> Other (please specify):
PRIMARY	<input type="checkbox"/> Coagulation/Flocculation <input type="checkbox"/> Dissolved air flotation (DAF) <input type="checkbox"/> Sedimentation tanks or Settler/Clarifier <input checked="" type="checkbox"/> Other (please specify): NA
SECONDARY/BIOLOGICAL	<input checked="" type="checkbox"/> Activated sludge process. Aerobic reactor <input type="checkbox"/> Biological biofilm reactor (MBBR, SAF, RBC..) <input type="checkbox"/> Sequencing batch reactor (SBR) <input type="checkbox"/> Other (please specify):



TERTIARY	<input type="checkbox"/> Absorption with activated carbon
	<input type="checkbox"/> High rate filtration
	<input type="checkbox"/> Techniques (Ozone, Fenton reaction, Photo catalytic degradation...)
	<input checked="" type="checkbox"/> Other (please specify): NA

\*The information has been provided by the factory.

<b>Sampler accreditation certification number (ZDHC):</b>		<b>M.SHAJAKHAN (C74D106820197)</b>	
<b>Sampling affiliate</b>		<b>SGS India Pvt. Ltd.,</b>	
<b>Sample description</b>			
	<b>Simple</b>	<b>Composite</b>	<b>Comments</b>
(1) Untreated wastewater	No	Yes,Black, Composite Sampling at 11:00 – 17:15	--
(2) Effluent	No	No	--
(3) Sludge	Yes,Black, Grab Sampling at 13:30	No	--
(4) Leachate	No	--	--

<b>Internal description – Final Test Report</b>	
Testing laboratory	<b>SGS India Pvt. Ltd.,</b>
Internal codification number (report number)	CH:TX: 1642005939
Reference sample number (sample ID)	--
Received on	08/09/2025
Analysis carried out from	08/09/2025 – 11/09/2025
Arrival temperature at lab	8 °C
Comments	--

**Remark**

Sample received temperature is greater than 8°C and less than 10°C when received.

**Signed for and on behalf of  
SGS INDIA PVT LTD**

**S.Prasad**  
**Manager- Supply Chain Management**  
 Email your Test Report Related Enquiries at [Feedback.SLT@sgs.com](mailto:Feedback.SLT@sgs.com)



Summary of test results				
Test items	Untreated Wastewater	Effluent	Sludge	Leachate
Conventional Parameters and Anions	-	-	Please refer to the information in TEST RESULTS	-
Metals	-	-	NA	-
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	ND	-	SAMPLE AND REPORT ONLY	-
Antimicrobials and Biocides	ND	-	-	-
Chlorinated Paraffins	ND	-	-	-
Chlorobenzenes & Chlorotoluenes	ND	-	SAMPLE AND REPORT ONLY	-
Chlorophenols	ND	-	-	-
N,N-di-methylformamide (DMFa)	ND	-	-	-
Dyes - Carcinogenic or Equivalent Concern	ND	-	-	-
Dyes - Disperse (Allergenic)	ND	-	-	-
Flame Retardants	ND	-	-	-
Glycols / Glycol Ethers	ND	-	-	-
Halogenated Solvents	ND	-	-	-
Organotin Compounds	ND	-	-	-
Other / Miscellaneous Chemicals	ND	-	-	-
Perfluorinated and Polyfluorinated Chemicals (PFCs)	ND	-	-	-
Phthalates - including all other esters of ortho-phthalic acid	ND	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)	ND	-	SAMPLE AND REPORT ONLY	-
Restricted Aromatic Amines (Cleavable from Azo-Colourants)	ND	-	-	-
UV Absorbers	ND	-	-	-
Volatile Organic Compounds (VOC)	ND	-	-	-

Sludge disposal pathway	
Comply sludge disposal pathway	Yes

**Remark (indicated in each parameter)**

- ND = Not detected (< ZDHC requirements)
- D = Detected (≥ ZDHC requirements)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- @ = Maximum holding time exceed



**Test results**

**Wastewater**

**1. Conventional Parameters and Anions**

Test item	Test method	Limit			Reporting limit	Result	Unit
		Foundational	Progressive	Aspirational		Effluent	
pH	SM 4500 H+	Textiles and Leather: 6-9			NA	-	-
Temperature Difference	SM 2550	Textiles and Leather: Δ+15	Textiles and Leather: Δ+10	Textiles and Leather: Δ+5	NA	-	°C
E. Coli	SM 9221 B fermentation with LTB for presumptive followed by SM 9221 F (fluorogenic substrate)	Textiles and Leather: 126			126	-	MPN/ 100mL
Colour (436nm; 525nm; 620nm)	ISO 7887 B	Textiles and Leather: 7;5;3	Textiles and Leather: 5;3;2	Textiles and Leather: 2;1;1	2;1;1	-	m <sup>-1</sup>
Persistent Foam	-	Textiles and Leather: Absent			NA	-	-
Wastewater Flow Rate	-	-			NA	60 (f)	m <sup>3</sup> /day
Ammonium-Nitrogen	ISO 7150	Textiles: 10 Leather: 15	Textiles: 1 Leather: 10	Textiles: 0.5 Leather: 1	0.5	-	mg/L
AOX	ISO 9562	Textiles and Leather: 3	Textiles and Leather: 0.5	Textiles and Leather: 0.1	0.1	-	mg/L
Biochemical Oxygen Demand 5-days Concentration (BOD <sub>5</sub> )	SM 5210 B	Textiles: 30 Leather: 50	Textiles: 15 Leather: 30	Textiles: 8 Leather: 20	8	-	mg/L
Chemical Oxygen Demand (COD)	SM 5220 D	Textiles: 150 Leather: 250	Textiles: 80 Leather: 150	Textiles: 40 Leather: 100	40	-	mg/L
Dissolved Oxygen (DO)	SM 4500 - O	Textiles and Leather: ≥4			4	-	mg/L
Oil and Grease	IS 3025 part 39	Textiles: 10 Leather: 20	Textiles: 2 Leather: 10	Textiles: 0.5 Leather: 5	0.5	-	mg/L
Total Phenols / Phenol Index	SM 5530 B/C	Textiles: 0.5 Leather: 0.5	Textiles: 0.01 Leather: 0.3	Textiles: 0.001 Leather: 0.1	0.001	-	mg/L
Total Chlorine	SM 4500 - Cl-G	Textiles and Leather: 1			1	-	mg/L
Total Dissolved Solids (TDS)	SM 2540 C	Textiles and Leather: Sample and Report Only			50	-	mg/L
Total Nitrogen	IS 3025 part 34	Textiles: 20 Leather: 35	Textiles: 10 Leather: 20	Textiles: 5 Leather: 10	5	-	mg/L



Total Phosphorus	ISO 6878	Textiles: 3 Leather: 3	Textiles: 0.5 Leather: 1	Textiles: 0.1 Leather: 0.5	0.1	-	mg/L
Total Suspended Solids (TSS)	SM 2540 D	Textiles: 50 Leather: 70	Textiles: 15 Leather: 50	Textiles: 5 Leather: 20	5	-	mg/L
Chloride	SM 4500 Cl-D	Textiles and Leather: Sample and Report Only			1	-	mg/L
Cyanide, Total	SM 4500 CN	Textiles: 0.2	Textiles: 0.1	Textiles: 0.05	0.05	-	mg/L
Sulfate	SM 4500 SO42- E	Textiles and Leather: Sample and Report Only			5	-	mg/L
Sulfide	SM 4500 S2- D	Textiles: 0.5 Leather: 1	Textiles: 0.05 Leather: 0.5	Textiles: 0.01 Leather: 0.2	0.01	-	mg/L
Sulfite	ISO 10304 -3	Textiles and Leather: 2	Textiles and Leather: 0.5	Textiles and Leather: 0.2	0.2	-	mg/L

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- = Not required to be test
- (f) = Parameter tested in field
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed

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No decision rule is applied, when comparing the measurement result(s) with the applicable limit(s) according to the specification in the respective standard or as shared by the customer



**2. Heavy Metals**

Cr (VI): ISO 18412

Preparation: USEPA 3060 A

Analysis: USEPA 7196 - Analysis using UV-VIS Spectrophotometer

Ba, Se, Sn, Sb, As, Cr, Co, Cd, Cu, Pb, Ni, Ag, Zn, Hg: USEPA 200.8, acid digestion followed by ICP/ ICP-MS analysis(SO-IN-C&P-TE-051) & (SO-IN-C&P-TE-163)

Test item	CAS no.	Limit			Reporting limit	Result	Unit
		Foundational	Progressive	Aspirational		Effluent	
Antimony (Sb)	-	Textiles and Leather: 0.1	Textiles and Leather: 0.05	Textiles and Leather: 0.01	0.01	-	mg/L
Chromium VI (Cr VI)	-	Textiles: 0.05 Leather: 0.15	Textiles: 0.005 Leather: 0.05	Textiles: 0.001 Leather: 0.02	0.001	-	mg/L
Barium (Ba)	-	Textiles and Leather: Sample and Report Only			35	-	mg/L
Selenium (Se)	-	Textiles and Leather: Sample and Report Only			0.5	-	mg/L
Tin (Sn)	-	Textiles and Leather: Sample and Report Only			0.1	-	mg/L
Arsenic (As)	-	Textiles and Leather: 0.05	Textiles and Leather: 0.01	Textiles and Leather: 0.005	0.005	-	mg/L
Chromium (Cr), Total	-	Textiles: 0.2 Leather: 1.5	Textiles: 0.1 Leather: 0.8	Textiles: 0.05 Leather: 0.3	0.05	-	mg/L
Cobalt (Co)	-	Textiles and Leather: 0.05	Textiles and Leather: 0.02	Textiles and Leather: 0.01	0.01	-	mg/L
Cadmium (Cd)	-	Textiles and Leather: 0.1	Textiles and Leather: 0.05	Textiles and Leather: 0.01	0.01	-	mg/L
Copper (Cu)	-	Textiles and Leather: 1	Textiles and Leather: 0.5	Textiles and Leather: 0.25	0.25	-	mg/L
Lead (Pb)	-	Textiles and Leather: 0.1	Textiles and Leather: 0.05	Textiles and Leather: 0.01	0.01	-	mg/L
Nickel (Ni)	-	Textiles and Leather: 0.2	Textiles and Leather: 0.1	Textiles and Leather: 0.05	0.05	-	mg/L
Silver (Ag)	-	Textiles and Leather: 0.1	Textiles and Leather: 0.05	Textiles and Leather: 0.005	0.005	-	mg/L
Zinc (Zn)	-	Textiles and Leather: 5	Textiles and Leather: 1	Textiles and Leather: 0.5	0.1	-	mg/L
Mercury (Hg)	-	Textiles and Leather: 0.01	Textiles and Leather: 0.005	Textiles and Leather: 0.001	0.001	-	mg/L

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**3. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers**

NP/OP: With reference to ISO 18857-2 (Modified dichloromethane extraction) (GC-MS or LC-MS(-MS))

NPEO / OPEO: With reference to ISO 18857-2 (Modified dichloromethane extraction) (GC-MS or LC-MS(-MS)) (SO-IN-C&P-TE-052)

Test items	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Nonylphenol ethoxylates (NPEO)	Multiple including: 9016-45-9 / 26027-38-3 / 37205-87-1 / 68412-54-4 / 127087-87-0	Textiles and Leather: 5	ND	µg/L
Nonylphenol (NP), mixed isomers	Multiple including: 104-40-5 / 11066-49-2 / 25154-52-3 / 84852-15-3	Textiles and Leather: 5	ND	µg/L
Octylphenol ethoxylates (OPEO)	Multiple including: 9002-93-1 / 9036-19-5 / 68987-90-6	Textiles and Leather: 5	ND	µg/L
Octylphenol (OP), mixed isomers	Multiple including: 140-66-9 / 1806-26-4 / 27193-28-8	Textiles and Leather: 5	ND	µg/L

**Remark**

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4. Antimicrobials and Biocides

o-Phenylphenol (+salts): With reference to USEPA 8270 E. Determination by LC-MS(-MS)

Triclosan: With reference to USEPA 8270 E. Determination by LC-MS(-MS)

Permethrin: With reference to ISO 14154:2005. Determination by LC-MS(-MS) or GC-MS

(SO-IN-C&P-TE-147)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
o-Phenylphenol (+salts)	90-43-7	Textiles: 100 Leather: Sample and Report Only	ND	µg/L
Triclosan	3380-34-5	Textiles and Leather: 100	ND	µg/L
Permethrin	Multiple including: 52645-53-1	Textiles and Leather: 500	ND	µg/L

Remark

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**5. Chlorinated Paraffins**

MCCPs: Preparation: With reference to USEPA 3510 Analysis: With reference to ISO 18219-2:2021 with GC-MS(NCI)

SCCPs: Preparation: With reference to USEPA 3510 Analysis: With reference to ISO 18219-1:2021 with GC-MS(NCI)

(SO-IN-C&P-TE-065)

Test items	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	85535-85-9	Textiles and Leather: 500	ND	µg/L
Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	85535-84-8	Textiles and Leather: 25	ND	µg/L

**Remark**

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**6. Chlorobenzenes and Chlorotoluenes**

With reference to USEPA 8260 D, Dichloromethane extraction followed by GC-MS(SO-IN-C&P-TE-053)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
1,2-Dichlorobenzene	95-50-1	Textiles and Leather: 0.2	ND	µg/L
Monochlorobenzene	108-90-7	Textiles and Leather: 0.2	ND	µg/L
1,3-Dichlorobenzene	541-73-1	Textiles and Leather: 0.2	ND	µg/L
1,4-Dichlorobenzene	106-46-7	Textiles and Leather: 0.2	ND	µg/L
1,2,3-Trichlorobenzene	87-61-6	Textiles and Leather: 0.2	ND	µg/L
1,2,4-Trichlorobenzene	120-82-1	Textiles and Leather: 0.2	ND	µg/L
1,3,5-Trichlorobenzene	108-70-3	Textiles and Leather: 0.2	ND	µg/L
1,2,3,4-Tetrachlorobenzene	634-66-2	Textiles and Leather: 0.2	ND	µg/L
1,2,3,5-Tetrachlorobenzene	634-90-2	Textiles and Leather: 0.2	ND	µg/L
1,2,4,5-Tetrachlorobenzene	95-94-3	Textiles and Leather: 0.2	ND	µg/L
Pentachlorobenzene	608-93-5	Textiles and Leather: 0.2	ND	µg/L
Hexachlorobenzene	118-74-1	Textiles and Leather: 0.2	ND	µg/L
2-Chlorotoluene	95-49-8	Textiles and Leather: 0.2	ND	µg/L
3-Chlorotoluene	108-41-8	Textiles and Leather: 0.2	ND	µg/L
4-Chlorotoluene	106-43-4	Textiles and Leather: 0.2	ND	µg/L
2,3-Dichlorotoluene	32768-54-0	Textiles and Leather: 0.2	ND	µg/L
2,4-Dichlorotoluene	95-73-8	Textiles and Leather: 0.2	ND	µg/L
2,5-Dichlorotoluene	19398-61-9	Textiles and Leather: 0.2	ND	µg/L
2,6-Dichlorotoluene	118-69-4	Textiles and Leather: 0.2	ND	µg/L
3,4-Dichlorotoluene	95-75-0	Textiles and Leather: 0.2	ND	µg/L
3,5-Dichlorotoluene	25186-47-4	Textiles and Leather: 0.2	ND	µg/L
2,3,4-Trichlorotoluene	7359-72-0	Textiles and Leather: 0.2	ND	µg/L
2,3,6-Trichlorotoluene	2077-46-5	Textiles and Leather: 0.2	ND	µg/L
2,4,5-Trichlorotoluene	6639-30-1	Textiles and Leather: 0.2	ND	µg/L
2,4,6-Trichlorotoluene	23749-65-7	Textiles and Leather: 0.2	ND	µg/L



3,4,5-Trichlorotoluene	21472-86-6	Textiles and Leather: 0.2	ND	µg/L
2,3,4,5-Tetrachlorotoluene	1006-32-2	Textiles and Leather: 0.2	ND	µg/L
2,3,4,6-Tetrachlorotoluene	875-40-1	Textiles and Leather: 0.2	ND	µg/L
2,3,5,6-Tetrachlorotoluene	1006-31-1	Textiles and Leather: 0.2	ND	µg/L
Pentachlorotoluene	877-11-2	Textiles and Leather: 0.2	ND	µg/L

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**7. Chlorophenols**

With reference to USEPA 8270 E, Solvent extraction, derivatization with KOH, acetic anhydride followed by GC-MS(SO-IN-C&P-TE-054)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
2-Chlorophenol	95-57-8	Textiles and Leather: 0.5	ND	µg/L
2,3-Dichlorophenol	576-24-9	Textiles and Leather: 0.5	ND	µg/L
2,3,4-Trichlorophenol	15950-66-0	Textiles and Leather: 0.5	ND	µg/L
2,3,5-Trichlorophenol	933-78-8	Textiles and Leather: 0.5	ND	µg/L
2,3,6-Trichlorophenol	933-75-5	Textiles and Leather: 0.5	ND	µg/L
2,4-Dichlorophenol	120-83-2	Textiles and Leather: 0.5	ND	µg/L
2,4,5-Trichlorophenol	95-95-4	Textiles and Leather: 0.5	ND	µg/L
2,4,6-Trichlorophenol	88-06-2	Textiles and Leather: 0.5	ND	µg/L
2,5-Dichlorophenol	583-78-8	Textiles and Leather: 0.5	ND	µg/L
2,6-Dichlorophenol	87-65-0	Textiles and Leather: 0.5	ND	µg/L
3-Chlorophenol	108-43-0	Textiles and Leather: 0.5	ND	µg/L
3,4-Dichlorophenol	95-77-2	Textiles and Leather: 0.5	ND	µg/L
3,4,5-Trichlorophenol	609-19-8	Textiles and Leather: 0.5	ND	µg/L
3,5-Dichlorophenol	591-35-5	Textiles and Leather: 0.5	ND	µg/L
4-Chlorophenol	106-48-9	Textiles and Leather: 0.5	ND	µg/L
Pentachlorophenol PCP	87-86-5	Textiles and Leather: 0.5	ND	µg/L
2,3,5,6-Tetrachlorophenol	935-95-5	Textiles and Leather: 0.5	ND	µg/L
2,3,4,6-Tetrachlorophenol	58-90-2	Textiles and Leather: 0.5	ND	µg/L
2,3,4,5-Tetrachlorophenol	4901-51-3	Textiles and Leather: 0.5	ND	µg/L

**Remark**

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8. N,N-di-methylformamide (DMFa)

With reference to USEPA 8270 E(SO-IN-C&P-TE-146)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Dimethyl formamide; N,N-Dimethylformamide (DMFa)	68-12-2	Textiles: 1000 Leather: Sample and Report Only	ND	µg/L

Remark

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**9. Dyes - Carcinogenic or Equivalent Concern**

Liquid extraction with reference to DIN 54231: 2022; followed by LC-MS analysis (SO-IN-C&P-TE-056)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	Textiles and Leather: 500	ND	µg/L
C.I. Acid Red 26	3761-53-3	Textiles and Leather: 500	ND	µg/L
C.I. Acid Violet 49	1694-09-3	Textiles and Leather: 500	ND	µg/L
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	Textiles and Leather: 500	ND	µg/L
C.I. Basic Green 4 (Malachite Green Chloride)^	569-64-2	Textiles and Leather: 500	ND	µg/L
C.I. Basic Green 4 (Malachite Green Oxalate)^	2437-29-8	Textiles and Leather: 500	ND	µg/L
C.I. Basic Green 4 (Malachite Green)	10309-95-2	Textiles and Leather: 500	ND	µg/L
C.I. Basic Red 9	569-61-9	Textiles and Leather: 500	ND	µg/L
C.I. Basic Violet 14	632-99-5	Textiles and Leather: 500	ND	µg/L
C.I. Direct Black 38	1937-37-7	Textiles and Leather: 500	ND	µg/L
C.I. Direct Blue 6	2602-46-2	Textiles and Leather: 500	ND	µg/L
C.I. Direct Red 28	573-58-0	Textiles and Leather: 500	ND	µg/L
C.I. Disperse Blue 1	2475-45-8	Textiles and Leather: 500	ND	µg/L
C.I. Disperse Blue 3	2475-46-9	Textiles and Leather: 500	ND	µg/L
Disperse Orange 11	82-28-0	Textiles and Leather: 500	ND	µg/L

**Remark**

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- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed
- ^ = The test result is based on the calculation of selected element(s) and to the worst-case scenario



**10. Dyes - Disperse (Allergenic)**

Liquid extraction with reference to DIN 54231: 2022; followed by LC-MS analysis  
(SO-IN-C&P-TE-056)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Disperse Blue 102	12222-97-8	Textiles: 50	ND	µg/L
Disperse Blue 106	12223-01-7	Textiles: 50	ND	µg/L
Disperse Blue 124	61951-51-7	Textiles: 50	ND	µg/L
Disperse Blue 26	3860-63-7	Textiles: 50	ND	µg/L
Disperse Blue 35	12222-75-2	Textiles: 50	ND	µg/L
Disperse Blue 35	56524-77-7	Textiles: 50	ND	µg/L
Disperse Blue 7	3179-90-6	Textiles: 50	ND	µg/L
Disperse Brown 1	23355-64-8	Textiles: 50	ND	µg/L
Disperse Orange 1	2581-69-3	Textiles: 50	ND	µg/L
Disperse Orange 3	730-40-5	Textiles: 50	ND	µg/L
Disperse Orange 37/59/76	13301-61-6	Textiles: 50	ND	µg/L
Disperse Red 1	2872-52-8	Textiles: 50	ND	µg/L
Disperse Red 11	2872-48-2	Textiles: 50	ND	µg/L
Disperse Red 17	3179-89-3	Textiles: 50	ND	µg/L
Disperse Yellow 1	119-15-3	Textiles: 50	ND	µg/L
Disperse Yellow 3	2832-40-8	Textiles: 50	ND	µg/L
Disperse Yellow 39	12236-29-2	Textiles: 50	ND	µg/L
Disperse Yellow 49	54824-37-2	Textiles: 50	ND	µg/L
Disperse Yellow 9	6373-73-5	Textiles: 50	ND	µg/L

**Remark**

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**11. Flame Retardants**

Boric acid, Diboron trioxide, Disodium octaborate, Disodium tetraborate anhydrous, Tetraboron disodium heptaoxide, hydrate: With reference to USEPA 200.8 - Acid digestion followed by ICP/ ICP-MS analysis

Others: With reference to USEPA 8270 E, ISO 22032 - Dichloromethane extraction followed by GC-MS or LC-MS(-MS) (SO-IN-C&P-TE-057)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Boric acid	10043-35-3 / 11113-50-1	Textiles and Leather: 500*	ND (ND)**	µg/L
Diboron trioxide	1303-86-2	Textiles and Leather: 500*	ND (ND)**	µg/L
Disodium octaborate	12008-41-2	Textiles and Leather: 500*	ND (ND)**	µg/L
Disodium tetraborate, anhydrous	1303-96-4 / 1330-43-4	Textiles and Leather: 500*	ND (ND)**	µg/L
Tetraboron disodium heptaoxide, hydrate	12267-73-1	Textiles and Leather: 500*	ND (ND)**	µg/L
Hexabromocyclodecane (HBCDD)	3194-55-6	Textiles and Leather: 25	ND	µg/L
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	Textiles and Leather: 25	ND	µg/L
Polybromobiphenyls (PBB)	59536-65-1	Textiles and Leather: 25	ND	µg/L
Monobromobiphenyls (MonoBB)	Multiple	Textiles and Leather: 25	ND	µg/L
Monobromodiphenylethers (MonoBDEs)	Multiple	Textiles and Leather: 25	ND	µg/L
Dibromobiphenyls (DiBB)	Multiple	Textiles and Leather: 25	ND	µg/L
Dibromopropylether	21850-44-2	Textiles and Leather: 25	ND	µg/L
Tribromodiphenylethers (TriBDEs)	Multiple	Textiles and Leather: 25	ND	µg/L
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	Textiles and Leather: 25	ND	µg/L
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	Textiles and Leather: 25	ND	µg/L
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	Textiles and Leather: 25	ND	µg/L
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	Textiles and Leather: 25	ND	µg/L
Octabromobiphenyls (OctaBB)	Multiple	Textiles and Leather: 25	ND	µg/L
Octabromodiphenyl ether (OctaBDE)	32536-52-0	Textiles and Leather: 25	ND	µg/L



Nonabromobiphenyls (NonaBB)	Multiple	Textiles and Leather: 25	ND	µg/L
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	Textiles and Leather: 25	ND	µg/L
Decabromobiphenyl (DecaBB)	13654-09-6	Textiles and Leather: 25	ND	µg/L
Decabromodiphenyl ether (DecaBDE)	1163-19-5	Textiles and Leather: 25	ND	µg/L
Tetrabromobisphenol A (TBBPA)	79-94-7	Textiles and Leather: 25	ND	µg/L
Bis(2,3-dibromopropyl) phosphate (BDBPP)	5412-25-9	Textiles and Leather: 25	ND	µg/L
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	Textiles and Leather: 25	ND	µg/L
Tris(1-aziridinyl) phosphine oxide (TEPA)	545-55-1	Textiles and Leather: 25	ND	µg/L
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	Textiles and Leather: 25	ND	µg/L
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	Textiles and Leather: 25	ND	µg/L
Tris(2,3,-dibromopropyl)-phosphate (TRIS)	126-72-7	Textiles and Leather: 25	ND	µg/L

**Remark**

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed
- \* = Limit refers to elemental boron, not the salt.
- \*\* = Result in term of elemental boron (Result in term of the corresponding boron salt)



**12. Glycols / Glycol Ethers**

With reference to USEPA 8270 E followed by GC-MS(SO-IN-C&P-TE-058)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
2-ethoxyethanol	110-80-5	Textiles and Leather: 50	ND	µg/L
2-ethoxyethyl acetate	111-15-9	Textiles and Leather: 50	ND	µg/L
2-methoxyethanol	109-86-4	Textiles and Leather: 50	ND	µg/L
2-methoxyethylacetate	110-49-6	Textiles and Leather: 50	ND	µg/L
2-methoxypropylacetate	70657-70-4	Textiles and Leather: 50	ND	µg/L
Bis(2-methoxyethyl)-ether	111-96-6	Textiles and Leather: 50	ND	µg/L
Ethylene glycol dimethylether	110-71-4	Textiles and Leather: 50	ND	µg/L
Triethylene glycol dimethyl ether	112-49-2	Textiles and Leather: 50	ND	µg/L

**Remark**

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**13. Halogenated Solvents**

With reference to USEPA 8260 D, followed by GC-MS(SO-IN-C&P-TE-059)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
1,2-Dichloroethane	107-06-2	Textiles and Leather: 1	ND	µg/L
Methylene chloride	75-09-2	Textiles and Leather: 1	ND	µg/L
Tetrachloroethene	127-18-4	Textiles and Leather: 1	ND	µg/L
Trichloroethene	79-01-6	Textiles and Leather: 1	ND	µg/L

**Remark**

1 µg/L = 0.001 ppm  
 ND = Not detected (< Reporting limit)  
 NA = Not applicable  
 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed



**14. Organotin Compounds**

TeET: With reference to ISO 17353

Others: With reference to ISO 17353 - Derivatization with NaB(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> followed by GC-MS(SO-IN-C&P-TE-060)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Dipropyltin Compounds (DPT)	Multiple including: 867-36-7	Textiles and Leather: 0.01	ND	µg/L
Mono-, di- and tri-butyltin derivatives	Multiple including: 1118-46-3, 1461-22-9	Textiles and Leather: 0.01	ND	µg/L
Monobutyltin (MBT)		Textiles and Leather: 0.01	ND	µg/L
Dibutyltin (DBT)		Textiles and Leather: 0.01	ND	µg/L
Tributyltin (TBT)		Textiles and Leather: 0.01	ND	µg/L
Mono-, di- and tri-methyltin derivatives		Multiple including: 993-16-8, 753-73-1, 1066-45-1	Textiles and Leather: 0.01	ND
Monomethyltin (MMT)	Textiles and Leather: 0.01		ND	µg/L
Dimethyltin (DMT)	Textiles and Leather: 0.01		ND	µg/L
Trimethyltin (TMT)	Textiles and Leather: 0.01		ND	µg/L
Mono-, di- and tri-octyltin derivatives	Multiple including: 3091-25-6, 3542-36-7, 2587-76-0	Textiles and Leather: 0.01	ND	µg/L
Mono-octyltin (MOT)		Textiles and Leather: 0.01	ND	µg/L
Di-octyltin (DOT)		Textiles and Leather: 0.01	ND	µg/L
Tri-octyltin (TOT)		Textiles and Leather: 0.01	ND	µg/L
Mono-, di- and tri-phenyltin derivatives	Multiple including: 1124-19-2, 1135-99-5, 639-58-7	Textiles and Leather: 0.01	ND	µg/L
Monophenyltin (MPHT)		Textiles and Leather: 0.01	ND	µg/L
Diphenyltin (DPHT)		Textiles and Leather: 0.01	ND	µg/L
Triphenyltin (TPHT)		Textiles and Leather: 0.01	ND	µg/L
Tetrabutyltin Compounds (TeBT)	Multiple including: 1461-25-2	Textiles and Leather: 0.01	ND	µg/L
Tetraethyltin Compounds (TeET)	Multiple including: 597-64-8	Textiles and Leather: 0.01	ND	µg/L



Tetraoctyltin Compounds (TeOT)	Multiple including: 3590-84-9	Textiles and Leather: 0.01	ND	µg/L
Tricyclohexyltin (TCyHT)	Multiple including: 3091-32-5	Textiles and Leather: 0.01	ND	µg/L
Tripropyltin Compounds (TPT)	Multiple including: 2279-76-7	Textiles and Leather: 0.01	ND	µg/L

**Remark**

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**15. Other / Miscellaneous Chemicals**

AEEA : With reference to Liquid extraction followed by LC-MS/MS  
 Bisphenol A: With reference to Liquid extraction followed by LC-MS  
 Thiourea: With reference to Liquid extraction followed by LC-MS  
 Quinoline: With reference to Liquid extraction followed by LC-MS  
 Borate, zinc salt: USEPA 200.8, acid digestion followed by ICP/ ICP-MS analysis  
 (SO-IN-C&P-TE-148A & SO-IN-C&P-TE-148B)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	Textiles and Leather: 500	ND	µg/L
Bisphenol A	80-05-7	Textiles and Leather: 10	ND	µg/L
Borate, zinc salt	12767-90-7	Textiles and Leather: 100*	B: 110 (ND)** Zn: ND (ND)**	µg/L
Quinoline	91-22-5	Textiles and Leather: 50	ND	µg/L
Thiourea	62-56-6	Textiles and Leather: 50	ND	µg/L

**Remark**

1 µg/L = 0.001 ppm  
 ND = Not detected (< Reporting limit)  
 NA = Not applicable  
 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed  
 \* = Limit refers to boron and zinc individually, not the salt.  
 \*\* = Result in term of elemental boron / zinc (Result in term of the corresponding boron / zinc salt)



**16. Perfluorinated and Polyfluorinated Chemicals (PFCs)**

PFCs: Solvent extraction with reference to EPA 537/ EPA 8270E / BSEN 12673 followed by LC-MSMS and GC-MSMS analysis.

FTOH: Solvent extraction with reference to EPA 537/ EPA 8270E / BSEN 12673 followed by LC-MSMS and GC-MSMS analysis.

(SO-IN-C&P-TE-061)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated wastewater	
Perfluorooctane sulfonate (PFOS)*	Multiple including: 1763-23-1	Textiles and Leather: 0.01	ND	µg/L
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	Textiles and Leather: 0.01	ND	µg/L
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	Textiles and Leather: 0.01	ND	µg/L
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2	Textiles and Leather: 0.01	ND	µg/L
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (MeFOSE)	24448-09-7	Textiles and Leather: 0.01	ND	µg/L
Perfluorooctane sulfonamide (PFOSA)	754-91-6	Textiles and Leather: 0.01	ND	µg/L
Perfluorooctanoic acid (PFOA)**	Multiple including: 335-67-1	Textiles and Leather: 1	ND	µg/L
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	Textiles and Leather: 1	ND	µg/L
Methyl Perfluorooctanoate (Me-PFOA)	376-27-2	Textiles and Leather: 1	ND	µg/L
Ethyl Perfluorooctanoate (Et-PFOA)	3108-24-5	Textiles and Leather: 1	ND	µg/L
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	Textiles and Leather: 1	ND	µg/L
1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)	27905-45-9	Textiles and Leather: 1	ND	µg/L
8:2 Fluorotelomer methacrylate (8:2 FTMA)	1996-88-9	Textiles and Leather: 1	ND	µg/L



Remark

1 µg/L = 0.001 ppm  
 ND = Not detected (< Reporting limit)  
 NA = Not applicable  
 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed  
 \* = PFOS refer to its salts/derivative including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH<sub>4</sub> (CAS No.: 29081-56-9), PFOS-NH(OH)<sub>2</sub> (CAS No.: 70225-14-8), PFOS-N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> (CAS No.: 56773-42-3) and POSF (CAS No.: 307-35-7)  
 \*\* = PFOA refer to its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1)



17. Phthalates - including all other esters of ortho-phthalic acid

Solvent extraction with reference to USEPA 8270E / ISO 18856 followed by GC-MS analysis.(SO-IN-C&P-TE-062)

Test items	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
1,2-benzenedicarboxylic acid, di-C6-8 branched and liearalkyl esters, C7-rich (DIHP)	71888-89-6 / 84777-06-0	Textiles and Leather: 10	ND	µg/L
1,2-benzenedicarboxylic acid, di-C7-11 branched and liearalkyl esters (DHNUP)	68515-42-4 / 68515-50-4	Textiles and Leather: 10	ND	µg/L
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	Textiles and Leather: 10	ND	µg/L
Butyl benzyl phthalate (BBP)	85-68-7	Textiles and Leather: 10	ND	µg/L
Di-cyclohexyl phthalate (DCHP)	84-61-7	Textiles and Leather: 10	ND	µg/L
Di-iso-decyl phthalate (DIDP)	26761-40-0	Textiles and Leather: 10	ND	µg/L
Di-iso-octyl phthalate (DIOP)	27554-26-3	Textiles and Leather: 10	ND	µg/L
Di-isobutyl phthalate (DIBP)	84-69-5	Textiles and Leather: 10	ND	µg/L
Di-isononyl phthalate (DINP)	28553-12-0	Textiles and Leather: 10	ND	µg/L
Di-n-hexyl phthalate (DnHP)	84-75-3	Textiles and Leather: 10	ND	µg/L
Di-n-octyl phthalate (DNOP)	117-84-0	Textiles and Leather: 10	ND	µg/L
Di-n-pentylphthalates	131-18-0	Textiles and Leather: 10	ND	µg/L
Di-n-propyl phthalate (DPRP)	131-16-8	Textiles and Leather: 10	ND	µg/L
Di(ethylhexyl) phthalate (DEHP)	117-81-7	Textiles and Leather: 10	ND	µg/L
Dibutyl phthalate (DBP)	84-74-2	Textiles and Leather: 10	ND	µg/L
Diethyl phthalate (DEP)	84-66-2	Textiles and Leather: 10	ND	µg/L
Diisopentylphthalates	605-50-5	Textiles and Leather: 10	ND	µg/L
Dinonyl phthalate (DNP)	84-76-4	Textiles and Leather: 10	ND	µg/L

Remark

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**18. Polycyclic Aromatic Hydrocarbons (PAHs)**

With reference to USEPA 8270 E - Solvent extraction followed by GC-MS(SO-IN-C&P-TE-063)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Acenaphthene	83-32-9	Textiles and Leather: 1	ND	µg/L
Acenaphthylene	208-96-8	Textiles and Leather: 1	ND	µg/L
Anthracene	120-12-7	Textiles and Leather: 1	ND	µg/L
Benzo(a)anthracene	56-55-3	Textiles and Leather: 1	ND	µg/L
Benzo(a)pyrene	50-32-8	Textiles and Leather: 1	ND	µg/L
Benzo(b)fluoranthene	205-99-2	Textiles and Leather: 1	ND	µg/L
Benzo(e)pyrene	192-97-2	Textiles and Leather: 1	ND	µg/L
Benzo(ghi)perylene	191-24-2	Textiles and Leather: 1	ND	µg/L
Benzo(j)fluoranthene	205-82-3	Textiles and Leather: 1	ND	µg/L
Benzo(k)fluoranthene	207-08-09	Textiles and Leather: 1	ND	µg/L
Chrysene	218-01-9	Textiles and Leather: 1	ND	µg/L
Dibenz(a,h)anthracene	53-70-3	Textiles and Leather: 1	ND	µg/L
Fluoranthene	206-44-0	Textiles and Leather: 1	ND	µg/L
Fluorene	86-73-7	Textiles and Leather: 1	ND	µg/L
Indeno (1,2,3-cd)pyrene	193-39-5	Textiles and Leather: 1	ND	µg/L
Naphthalene	91-20-3	Textiles and Leather: 1	ND	µg/L
Phenanthrene	85-01-8	Textiles and Leather: 1	ND	µg/L
Pyrene	129-00-0	Textiles and Leather: 1	ND	µg/L

**Remark**

- 1 µg/L = 0.001 ppm
- ND = Not detected (< Reporting limit)
- NA = Not applicable
- NC = Not conducted
- = Not required to be tested
- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**19. Restricted Aromatic Amines (Cleavable from Azo-Colourants)**

With reference to ISO 14362-1, USEPA 8270 E - Reduction step with sodium dithionite, solvent extraction followed by GC-MS or LC-MS/MS (SO-IN-C&P-TE-055)

Test item	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
2-naphthylamine	91-59-8	Textiles and Leather: 0.1	ND	µg/L
2-naphthylammoniumacetate^	553-00-4	Textiles and Leather: 0.1	ND	µg/L
2,4-xylidine	95-68-1	Textiles and Leather: 0.1	ND	µg/L
2,4,5-trimethylaniline	137-17-7	Textiles and Leather: 0.1	ND	µg/L
2,4,5-trimethylaniline hydrochloride^	21436-97-5	Textiles and Leather: 0.1	ND	µg/L
2,6-xylidine	87-62-7	Textiles and Leather: 0.1	ND	µg/L
3,3'-dichlorobenzidine	91-94-1	Textiles and Leather: 0.1	ND	µg/L
3,3-dimethoxybenzidine	119-90-4	Textiles and Leather: 0.1	ND	µg/L
3,3-dimethylbenzidine	119-93-7	Textiles and Leather: 0.1	ND	µg/L
4-aminoazobenzene	60-09-3	Textiles and Leather: 0.1	ND	µg/L
4-aminodiphenyl	92-67-1	Textiles and Leather: 0.1	ND	µg/L
4-chloro-o-toluidine	95-69-2	Textiles and Leather: 0.1	ND	µg/L
4-chloro-o-toluidinium chloride^	3165-93-3	Textiles and Leather: 0.1	ND	µg/L
4-chloroaniline	106-47-8	Textiles and Leather: 0.1	ND	µg/L
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate^	39156-41-7	Textiles and Leather: 0.1	ND	µg/L
4-methoxy-m-phenylenediamine	615-05-4	Textiles and Leather: 0.1	ND	µg/L
4-methyl-m-phenylenediamine	95-80-7	Textiles and Leather: 0.1	ND	µg/L
4,4-methylene-bis-(2-chloro-aniline)	101-14-4	Textiles and Leather: 0.1	ND	µg/L
4,4-methylenedi-o-toluidine	838-88-0	Textiles and Leather: 0.1	ND	µg/L
4,4-methylenedianiline	101-77-9	Textiles and Leather: 0.1	ND	µg/L
4,4-oxydianiline	101-80-4	Textiles and Leather: 0.1	ND	µg/L
4,4-thiodianiline	139-65-1	Textiles and Leather: 0.1	ND	µg/L
5-nitro-o-toluidine	99-55-8	Textiles and Leather: 0.1	ND	µg/L
6-methoxy-m-toluidine	120-71-8	Textiles and Leather: 0.1	ND	µg/L



Benzidine	92-87-5	Textiles and Leather: 0.1	ND	µg/L
o-aminoazotoluene	97-56-3	Textiles and Leather: 0.1	ND	µg/L
o-anisidine	90-04-0	Textiles and Leather: 0.1	ND	µg/L
o-toluidine	95-53-4	Textiles and Leather: 0.1	ND	µg/L

**Remark**

1 µg/L = 0.001 ppm  
 ND = Not detected (< Reporting limit)  
 NA = Not applicable  
 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed  
 \* = The amine was detected according to ISO 14362-1:2017 with the reducing agent. A similar result was obtained from the procedure carried out without the reducing agent. According to ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from a source other than azo colorants  
 # = The amine was detected according to ISO 14362-1:2017 with the reducing agent. Confirmation procedure was carried out without reducing agent, according to ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from azo colorants  
 ^ = The test result is based on the calculation of selected element(s) and to the worst-case scenario

**20. UV Absorbers**

With reference to USEPA 8270 E - Dichloromethane extraction followed by GC-MS(SO-IN-C&P-TE-149)

Test item	CAS no.	Reporting Limit	Result	Unit
			Untreated Wastewater	
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	Textiles and Leather: 100	ND	µg/L
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	Textiles and Leather: 100	ND	µg/L
2-benzotriazol-2-yl-4,6-di-tertbutylphenol (UV-320)	3846-71-7	Textiles and Leather: 100	ND	µg/L
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	Textiles and Leather: 100	ND	µg/L

**Remark**

1 µg/L = 0.001 ppm  
 ND = Not detected (< Reporting limit)  
 NA = Not applicable  
 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed



**21. Volatile Organic Compounds (VOC)**

Benzene, m-cresol/o-cresol/p-cresol, Xylene, Toluene :With reference to ISO 11423-1 - Headspace followed by GC-MS(SO-IN-C&P-TE-064)

Test Items	CAS no.	Reporting limit	Result	Unit
			Untreated Wastewater	
Benzene	71-43-2	Textiles and Leather: 1	ND	µg/L
m-cresol	108-39-4	Textiles and Leather: 1	ND	µg/L
o-cresol	95-48-7	Textiles and Leather: 1	ND	µg/L
p-cresol	106-44-5	Textiles and Leather: 1	ND	µg/L
Toluene	108-88-3	Textiles and Leather: 1	ND	µg/L
Xylene	1330-20-7	Textiles and Leather: 1	ND	µg/L

**Remark**

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**SLUDGE**

**22. Sludge Parameters - Step 1 - Conventional**

pH: USEPA 9045 D

% Solids: USEPA 160.3

Paint Filter Test: USEPA 9095 B

Fecal Coliform: USEPA 1681/ APHA 23rd Edition Chapter 9221E

Test item	CAS no.	Limit							Reporting limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Sludge	
pH	-	NA	NA	NA	5-11	5-11	6.5-9	6.5-9	-	NA	s.u.
Faecal Coliform	-	NA	NA	NA	NA	NA	<1000	<1000	Textiles and Leather: 1000	NA	MPN/g
% Solids	-	Sample and Report Only	-	52.7	%						
Paint Filter Test	-	NA	NA	NA	Pass	Pass	Pass	Pass	-	NA	-

**Remark**

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**23. Sludge Parameters - Step 1 - Anions**

Preparation: USEPA 9013

Analysis: USEPA 9213/9014

Test item	CAS no.	Limit - Dry weight							Reporting limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Sludge	
Cyanide	-	NA	NA	NA	85	70	70	70	Textile: 20	NA	mg/kg

**Remark**

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- (S) = The analysis was performed by a subcontracted laboratory assessed as competent
- # = Non accredited parameter
- @ = Maximum holding time exceed



**24. Sludge Parameters - Step 1 - Metals**

Sb, As, Cr, Co, Cd, Cu, Pb, Ni, Zn, Ba, Se, Ag: Preparation: USEPA 3050; Analysis: USEPA 6020 B -acid/peroxide digestion followed by ICP/ICP-MS analysis  
Cr VI: ISO 18412 ; Preparation: USEPA 3060 A ; Analysis: USEPA 7196 - Analysis using UV-VIS Spectrophotometer

Hg: Preparation: Preparation: USEPA 3050/USEPA 3051A ; Analysis: USEPA 6020 B -acid/peroxide digestion followed by ICP/ICP-MS analysis  
(SO-IN-C&P-TE-051) & (SO-IN-C&P-TE-163)

Test item	CAS no.	Limit - Dry weight		Reporting limit	Result	Unit
		Total metals threshold values*	Max total metals limits for Pathway G		Sludge	
Antimony (Sb)	-	12	NA	Textiles: 5	NA	mg/kg
Arsenic (As)	-	10	41	Textiles: 5 Leather: 2	NA	mg/kg
Barium (Ba)	-	700	N/A	Textiles: 200	NA	mg/kg
Cadmium (Cd)	-	3	39	Textiles: 1 Leather: 2	NA	mg/kg
Cobalt (Co)	-	1600	NA	Textiles: 400	NA	mg/kg
Copper (Cu)	-	200	1500	Textiles: 50	NA	mg/kg
Lead (Pb)	-	10	400	Textiles: 5 Leather: 2	NA	mg/kg
Nickel (Ni)	-	70	420	Textiles: 20	NA	mg/kg
Selenium (Se)	-	10	36	Textiles: 5	NA	mg/kg
Silver (Ag)	-	100	NA	Textiles: 50	NA	mg/kg
Zinc (Zn)	-	1000	2800	Textiles: 400	NA	mg/kg
Total Chromium (Cr)	-	100	1200	Textiles: 50	NA	mg/kg
Chromium VI (Cr VI)	-	50	50	Textiles: 20 Leather: 2	NA	mg/kg
Mercury (Hg)	-	1	17	Textiles: 1 Leather: 0.2	NA	mg/kg



Remark

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 NC = Not conducted  
 - = Not required to be tested  
 (S) = The analysis was performed by a subcontracted laboratory assessed as competent  
 # = Non accredited parameter  
 @ = Maximum holding time exceed  
 \* = Leachate should be tested if Total Metals Threshold Values is exceeded in sludge

25. Sludge Parameters - Step 1 - MRSL - Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

NP/OP: Preparation: Preparation: With reference to USEPA 3550 – Ultrasonic Analysis: With reference to ISO 18857-2 (GC-MS or LC-MS(-MS))  
 NPEO/OPEO: Preparation: Preparation: With reference to USEPA 3550 – Ultrasonic Analysis: With reference to ISO 18254-1, ISO 18857-2 (LC-MS(-MS))  
 (SO-IN-C&P-TE-052)

Test item	CAS no.	Limit - Dry weight							Reporting limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Sludge	
Nonylphenol ethoxylates (NPEO)	Multiple including: 9016-45-9 / 26027-38-3 / 37205-87-1 / 68412-54-4 / 127087-87-0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Textiles and Leather: 0.4	ND	mg/kg
Nonylphenol (NP), mixed isomers	Multiple including: 104-40-5 / 11066-49-2 / 25154-52-3 / 84852-15-3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Textiles and Leather: 0.4	ND	mg/kg
Octylphenol ethoxylates (OPEO)	Multiple including: 9002-93-1 / 9036-19-5 / 68987-90-6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Textiles and Leather: 0.4	ND	mg/kg
Octylphenol (OP), mixed isomers	Multiple including: 140-66-9 / 1806-26-4 / 27193-28-8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Textiles and Leather: 0.4	ND	mg/kg

Remark

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 # = Non accredited parameter  
 @ = Maximum holding time exceed



**26. Sludge Parameters - Step 1 - MRSL - Polycyclic Aromatic Hydrocarbons (PAHs)**

Preparation: With reference to USEPA 3550 – Ultrasonic: Clean-up: With reference to USEPA 3650

Analysis: With reference to USEPA 8270 E

(SO-IN-C&P-TE-063)

Test items	CAS no.	Limit - Dry weight							Reporting limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Sludge	
Acenaphthene	83-32-9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Acenaphthylene	208-96-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Anthracene	120-12-7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(a)anthracene	56-55-3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(a)pyrene	50-32-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(b)fluoranthene	205-99-2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(e)pyrene	192-97-2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(ghi)perylene	191-24-2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(j)fluoranthene	205-82-3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Benzo(k)fluoranthene	207-08-09	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Chrysene	218-01-9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Dibenz(a,h)anthracene	53-70-3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Fluoranthene	206-44-0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Fluorene	86-73-7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Indeno (1,2,3-cd)pyrene	193-39-5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg



Naphthalene	91-20-3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Phenanthrene	85-01-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Pyrene	129-00-0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg

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**27. Sludge Parameters - Step 1 - MRSL - Chlorotoluenes**

Preparation: USEPA 3550 – Ultrasonic Clean-up: With reference to USEPA 3650B: Analysis: With reference to USEPA 8270 E (SO-IN-C&P-TE-053)

Test items	CAS no.	Limit - Dry weight							Reporting limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Sludge	
2-Chlorotoluene	95-49-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
3-Chlorotoluene	108-41-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
4-Chlorotoluene	106-43-4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,3-Dichlorotoluene	32768-54-0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,4-Dichlorotoluene	95-73-8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,5-Dichlorotoluene	19398-61-9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,6-Dichlorotoluene	118-69-4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
3,4-Dichlorotoluene	95-75-0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
3,5-Dichlorotoluene	25186-47-4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,3,4-Trichlorotoluene	7359-72-0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,3,6-Trichlorotoluene	2077-46-5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,4,5-Trichlorotoluene	6639-30-1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,4,6-Trichlorotoluene	23749-65-7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
3,4,5-Trichlorotoluene	21472-86-6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,3,4,5-Tetrachlorotoluene	1006-32-2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg



2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
2,3,5,6-Tetrachlorotoluene	1006-31-1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg
Pentachlorotoluene	877-11-2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Textiles and Leather: 0.2	ND	mg/kg

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**LEACHATE**

**28. Leachate Parameters - Step 2 - Metals**

As, Cd, Cr, Pb, Sb, Ba, Co, Cu, Ni, Se, Ag, Zn: Leachate Extraction: USEPA 1311 Analysis: ISO 11885

Cr (VI): Leachate Extraction: USEPA 1311; Analysis: ISO 18412

Hg: Leachate Extraction: USEPA 1311; Analysis: US EPA 6020B/ISO 11885

(SO-IN-C&P-TE-051) & (SO-IN-C&P-TE-163)

Test item	CAS no.	Limit							Reporting Limit	Result	Unit
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E	Pathway F	Pathway G		Leachate	
Antimony (Sb)	-	NA	NA	NA	7.8	0.6	0.6	0.6	0.01	-	mg/L
Arsenic (As)	-	NA	NA	NA	2.75	0.5	0.5	0.5	0.005	-	mg/L
Barium (Ba)	-	NA	NA	NA	67.5	35	35	35	35	-	mg/L
Cadmium (Cd)	-	NA	NA	NA	0.58	0.15	0.15	0.15	0.01	-	mg/L
Cobalt (Co)	-	NA	NA	NA	80	80	80	80	0.01	-	mg/L
Copper (Cu)	-	NA	NA	NA	17.5	10	10	10	0.25	-	mg/L
Lead (Pb)	-	NA	NA	NA	2.75	0.5	0.5	0.5	0.01	-	mg/L
Nickel (Ni)	-	NA	NA	NA	11.75	3.5	3.5	3.5	0.05	-	mg/L
Selenium (Se)	-	NA	NA	NA	0.75	0.5	0.5	0.5	0.5	-	mg/L
Silver (Ag)	-	NA	NA	NA	5	5	5	5	0.005	-	mg/L
Zinc (Zn)	-	NA	NA	NA	50	50	50	50	0.1	-	mg/L
Total Chromium (Cr)	-	NA	NA	NA	5	5	5	5	0.05	-	mg/L
Chromium VI (Cr VI)	-	NA	NA	NA	3.75	2.5	2.5	2.5	0.001	-	mg/L
Mercury (Hg)	-	NA	NA	NA	0.125	0.05	0.05	0.05	0.001	-	mg/L

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**ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration**

**ZDHC Wastewater Sampling Information:**

Factory Name: SHAHI EXPORTS PVT LTD  
 Factory Address: 105 Unit 105M - 8156, KANDR Industrial Area, Nidige, Machenahalli, Shivmogga - Shivmogga - Karnataka  
 Sampling Location: 2  
 GPS Data: 13.87283 Longitude: 75.64372  
 Sampling Date: 05-09-25  
 Sampling Time: 11:00 am - 5:15 pm.  
 Sample ID: \_\_\_\_\_

**Sampler Information:**

Sampler Name: M. Shajahan  
 Sampler E-mail: shajahan.m@sgs.com  
 ZDHC Sampler Accreditation Cert. No.: C74D10682019T

**Sampling Method:**

Grab  5-hour Composite  Others, please specify: \_\_\_\_\_  
 Autosampler  Manual

**Discharge Method:**

Direct  Indirect (w/pretreatment)  Indirect (w/o pretreatment)  Zero Liquid Discharge (ZLD)

**ZDHC Wastewater Sampling Field Testing QA/QC**

ZDHC Wastewater Sampling Field Testing QA/QC			
Parameter	LCS Known:	LCS Measured	Accuracy %
pH	7.0, 8.0, 10.0	6.98, 3.99, 10.0	
Total Chlorine			

**ZDHC Wastewater Flow Device Dimensions**

ZDHC Wastewater Flow Device Dimensions				
Measurement (cm)	Meter	Pipe (ID)	Flume (L)	Valve (V)
Diameter	NA			
Depth	NA	NA	NA	

**ZDHC Wastewater Sample Collection Field Test Measurements**

ZDHC Wastewater Sample Collection Field Test Measurements										
Sampling Time (Hours)	Temp (°C)		pH	Visible Colour	Persistent Foams (Yes/No)	Dissolved Oxygen (mg/L)	Total Chlorine (mg/L)	Wastewater Flow Meter (L/min)	Alternate Measured Flow	
	Wastewater Discharge	Receiving Water							Depth (cm)	Velocity (cm/s)
0	41.1		9.8	NAVY	NO					
1	40.8		10.3	NAVY	NO					
2	43.7		9.3	Black	NO					
3	42.1		9.8	NAVY	NO					
4	40.9		10.2	NAVY	NO					
5	40.3		10.5	GREY	NO					
6	43.1		11.1	NAVY	NO					
Average	41.7		10.1	Black	NO					

**ZDHC Wastewater Sampling - Facility Confirmation**

The wastewater samples have been collected under the facility's normal production scale and wastewater flow rate. The sampler listed below was on-site and collected the samples.

Factory Name: \_\_\_\_\_ Sampler Name: M. Shajahan  
 Factory Representative Name: \_\_\_\_\_ ZDHC Sampler Accreditation Cert. No.: C74D10682019T  
 Factory Representative Signature and Stamp: [Signature] Sampler Signature: [Signature]



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RSTS-WW-D-005



### ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration

**ZDHC Wastewater Sampling Information:**

Factory Name: SHAHI EXPORTS PVT LTD  
 Unit 105 - RTS6, KMDS Industrial Area, Nijige, Machenahalli, Shimoga - Shimoga - Karnataka  
 Sampling Location: 105  
 GPS Data: 13.87362 Longitude: 75.6432  
 Sampling Date: 05.09.25  
 Sampling Time: 1:30 PM  
 Sample ID: \_\_\_\_\_

**Sampler Information:**

Sampler Name: M. Shagabhan  
 Sampler E-mail: mshagabhan@sgs.com  
 ZDHC Sampler Accreditation Cert. No.: CT4D108820197

**Sampling Method:**  
 Grab  6-hour Composite  Other, please specify: Color: Black.  
 Autosampler  Manual

**Discharge Method:**  
 Direct  Indirect (w/pretreatment)  Indirect (w/o pretreatment)  Zero Liquid Discharge (ZLD)

**ZDHC Wastewater Sampling Field Testing QA/QC**

Parameter	LCS Known	LCS Measured	Accuracy %
pH	7.0, 4.0, 10.0	<u>N/A</u>	
Total Chloride			

**ZDHC Wastewater Flow Device Dimensions**

Measurement (cm)	Meter	Pipe ID	Flange ID	Wier (m)
Diameter	NA	NA	NA	
Depth	NA	NA	NA	

**ZDHC Wastewater Sample Collection Field Test Measurements**

Sampling Time (Hour)	Temp (°C)		pH	Visible Colour	Residual Free (Yes/No)	Dissolved Oxygen (mg/L)	Total Chlorine (mg/L)	Wastewater Flow Meter (L/min)	Alternate Measured Flow	
	Wastewater Discharge	Receiving Water							Depth (mm)	Velocity (m/s)
0										
1										
2										
3										
4										
5										
6										
Average										

**ZDHC Wastewater Sampling - Facility Confirmation**

The wastewater samples have been collected under the facility's normal production scale and wastewater flow rate. The sampler listed below was on-site and collected the samples.

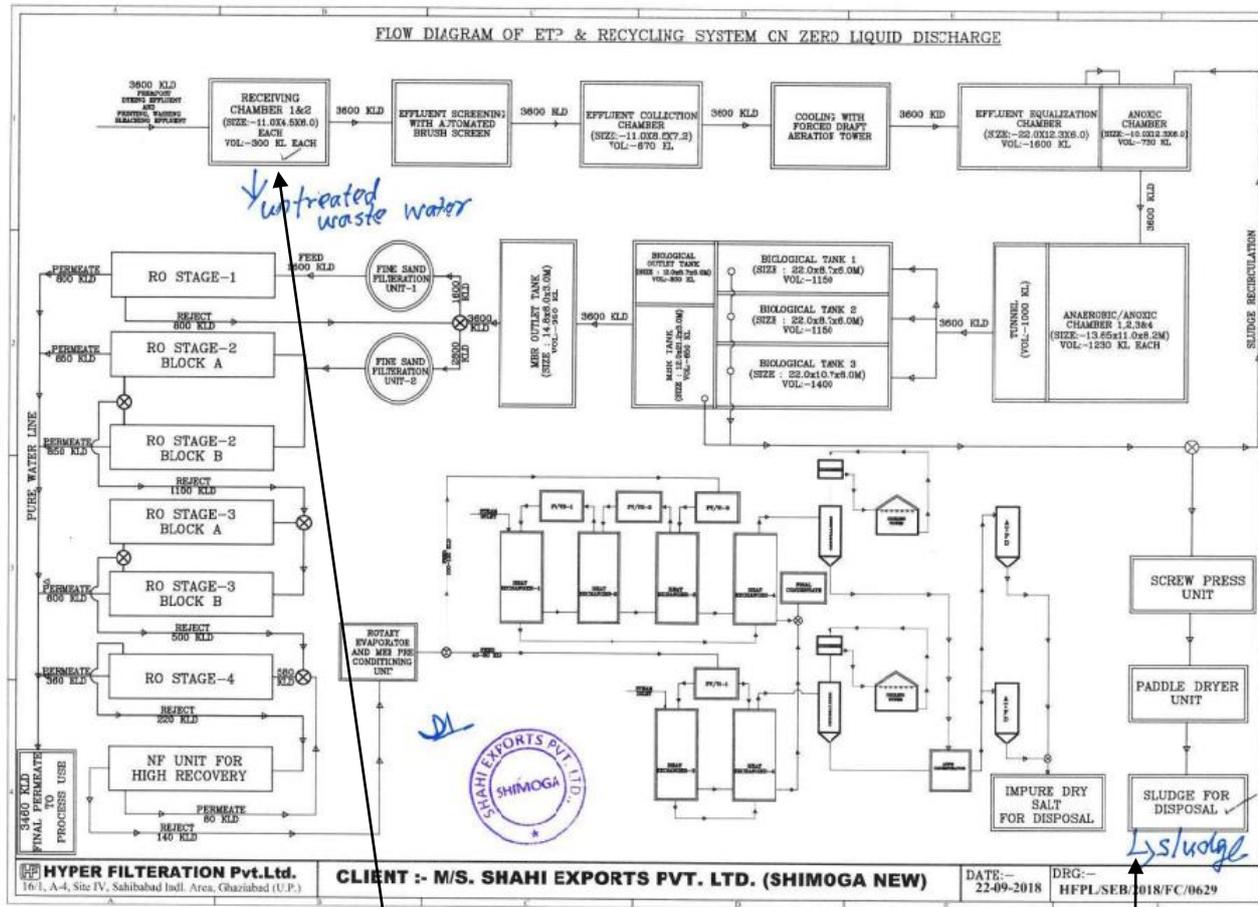
Factory Name: \_\_\_\_\_ Sampler Name: M. Shagabhan  
 Factory Representative Name: \_\_\_\_\_ ZDHC Sampler Accreditation Cert. No.: CT4D108820197  
 Factory Representative Signature and Stamp: Sampler Signature:

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## PIPING PLAN



Untreated Wastewater

Sludge



## SAMPLING PHOTOS

UNTREATED WASTEWATER	SLUDGE
GPS Data: 13.86843 N, 75.64304 E	GPS Data: 13.86785 N, 75.64343 E
SAMPLING LOCATION, CLOSE-UP VIEW	SAMPLING LOCATION, CLOSE-UP VIEW
	
SAMPLING LOCATION, FAR VIEW	SAMPLING LOCATION, FAR VIEW
	