SOFTLINES WASTEWATER TESTING

TEST REPORT

Number:TURA240120020

Date of sampling	15/10/2024
Reporting Date	17/10/2024

Audit ID	183852	Audit firm	INTERTEK TURKEY
Company name	MARMARA BOYAMA APRE VE BASKI SAN.A.S		
Contact person	SELAY ALMALI		
Type of tax - tax ID no	6121377548		
Address	VAKIFLAR OSB MAH. SANAY CAD. NO: 17 /1		
Region state province	TEKIRDAG		
Town city / village	ERGENE		
Zip/Post code	59930		
Country	TURKEY		

Type of wastewater discharge				
Type of wastewater discharge:	Indirect discharge			
On-site effluent treatment plant (ETP):	NO			
Pre - treatment:	NO			
	Preliminary	**Primary**	**Secondary/Biological**	**Tertiary**
	☐ Screening/ Sieving/Grit Remover ☐ Homogenization tank ☐ pH correction ☐ Other ☑ None	☐ Coagulation/Flocculation ☐ Dissolved air flotation (DAF) ☐ Sedimentation tanks or Settler/Clarifier ☐ Other	☐ Activated sludge process, Aerobic reactor ☐ Biological Biofilm reactor (MBBR, SAF, RBC...). ☐ BSequencing batch reactor (SBR) ☐ Other	☐ Absorption with activated carbon ☐ High rate filtration ☐ Advanced oxidation techniques (Ozone, Fenton reaction, photo catalytic degradation...) ☐ Other
Description of discharge:	Discharge to Ergene Organized Industrial Zone ETP			
[If direct discharge] ambient temperature of receiving water body (ºC):	N/A			
Average total industrial wastewater generated (m3/day):	800 m3/day			

Sludge Disposal Pathway	N/A	

Sampler accreditation certification number (ZDHC):		ZDHC-A-22-E-C001068-R21CD-FA2B0	
Sample description	**Simple**	**Composite**	**Comments**
(1) Untreated wastewater (BT)	X	[Grey, composite sample at 10:15, 11:15, 12:15, 13:15, 14:15, 15:15, 16:15] [Sampling location: Latitude 41.275316, Longitude 27.599387]	X
(2) Effluent (AT)	X	X	X
(3) Sludge	X	X	X

Intertek Test Hizmetleri A.S.
Merkez Mahallesi Sanayi Cad. No.23 Altindag Plaza Yenibosna 34197 - ISTANBUL / TURKEY

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Local Legal Data	
Local Legal Standard name [a]	N/A
Local legal standard no. [a]:	N/A
Parameters (ZDHC WWSG V2.1, Table 2-3) exceeded local regulation:	N/A
Discharge permit provided:	YES

Internal description – Intertek Lab Issuing Final Test Report	
Sampling laboratory	INTERTEK TURKEY
Testing laboratory	INTERTEK TURKEY
Date received sample	16/10/2024
Date and time of the beginning of sampling	15/10/2024, 10:15
Date and time of the end of sampling	15/10/2024, 15:15
Testing period	16/10/2024 to 17/10/2024
Reporting date	17/10/2024
Arrival Temperature at Lab	7.7ºC
Internal codification number	N/A
Reference sample number	TURA240120020
Comments	Samples received within 16 hours.

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Summary of test results		
Wastewater/ MRSL - Test items	**Testing period**	**Sample 1 (untreated)**
Alkylphenols (APs) & Alkylphenol ethoxylates (APEOs)	From 16/10/2024 to 17/10/2024	ND
Anti - Microbials & Biocides	From 16/10/2024 to 17/10/2024	ND
Chlorinated parafins	From 16/10/2024 to 17/10/2024	ND
Chlorobenzenes and Chlorotoluenes	From 16/10/2024 to 17/10/2024	ND
Chlorophenols	From 16/10/2024 to 17/10/2024	ND
Dimethyl Formamide (DMFa) (*)	From 16/10/2024 to 17/10/2024	ND
Dyes – Carcinogenic or Equivalent Concern	From 16/10/2024 to 17/10/2024	ND
Dyes – Disperse (Allergenic)	From 16/10/2024 to 17/10/2024	ND
Dyes-Navy Blue Colourant	From 16/10/2024 to 17/10/2024	ND
Flame retardants	From 16/10/2024 to 17/10/2024	ND
Glycols	From 16/10/2024 to 17/10/2024	ND
Halogenated solvents	From 16/10/2024 to 17/10/2024	ND
Organotin compounds	From 16/10/2024 to 17/10/2024	ND
Other/Miscellaneous Chemicals (^)	From 16/10/2024 to 17/10/2024	ND
Perfluorinated chemicals (PFCs)	From 16/10/2024 to 17/10/2024	ND
Phthalates	From 16/10/2024 to 17/10/2024	ND
Polycyclic aromatic hydrocarbons (PAHs)	From 16/10/2024 to 17/10/2024	ND
Restricted Aromatic Amines (Cleavable from Azo- colourants) Azo dyes	From 16/10/2024 to 17/10/2024	ND
UV Absorbers	From 16/10/2024 to 17/10/2024	ND
Volatile organic compounds (VOCs)	From 16/10/2024 to 17/10/2024	ND

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Wastewater / Heavy metals - Test items	Testing period	Sample 1 (Untreated)		
		Foundational	Progressive	Aspirational
Antimony	N/A			N/A
Chromium (VI)	From 16/10/2024 to 17/10/2024			Meet
Barium	N/A	N/A		
Selenium	N/A	N/A		
Tin	N/A	N/A		
Arsenic	From 16/10/2024 to 17/10/2024			Meet
Chromium (total)	N/A			N/A
Cobalt	N/A			N/A
Cadmium	From 16/10/2024 to 17/10/2024			Meet
Copper	N/A			N/A
Lead	From 16/10/2024 to 17/10/2024			Meet
Nickel	N/A			N/A
Silver	N/A			N/A
Zinc	N/A			N/A
Mercury	From 16/10/2024 to 17/10/2024			Meet

Wastewater / Conventional parameters - Test items	Testing period	Sample 2 (effluent)		
		Foundational	Progressive	Aspirational
pH[f]	N/A	N/A		
Temperature difference[f]	N/A			N/A
E.coli	N/A	N/A		
Colour	N/A			N/A
Persistent foam[f]	N/A	N/A		
Wastewater flowrate[f]	N/A	N/A		
Ammonium-Nitrogen	N/A			N/A
AOX	N/A			N/A
Biochemical Oxygen Demand (BOD_5)	N/A			N/A
Chemical Oxygen Demand (COD)	N/A			N/A
Dissolved Oxygen (DO)[f]	N/A	N/A		
Oil & Grease	N/A			N/A
Total Phenols / Phenol Index	N/A			N/A
Total Chlorine[f]	N/A	N/A		
Total Dissolved Solids (TDS)	N/A	N/A		
Total Nitrogen	N/A			N/A
Total Phosphorus	N/A			N/A
Total Suspended Solids (TSS)	N/A			N/A

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Wastewater / Anions - Test items	Testing period	Sample 2 (effluent)		
		Foundational	Progressive	Aspirational
Chloride	N/A	N/A		
Cyanide, total	N/A			N/A
Sulfate	N/A	N/A		
Sulfide	N/A			N/A
Sulfite	N/A			N/A

Sludge / Heavy metals - Test items	Testing period	Sample 3: Sludge (Total)	Sample 3: Sludge (Leachate)
Antimony	N/A	N/A	
Arsenic	N/A	N/A	
Barium	N/A	N/A	
Cadmium	N/A	N/A	
Cobalt	N/A	N/A	
Copper	N/A	N/A	
Lead	N/A	N/A	
Nickel	N/A	N/A	
Selenium	N/A	N/A	
Silver	N/A	N/A	
Chromium (total)	N/A	N/A	
Zinc	N/A	N/A	
Chromium VI	N/A	N/A	
Mercury	N/A	N/A	

Sludge / Anion - Test items	Testing period	Sample 3: Sludge
Cyanide	N/A	N/A

Sludge / Conventional parameters - Test items	Testing period	Sample 3: Sludge
pH	N/A	N/A
% Solids	N/A	N/A
Paint filter test	N/A	N/A
Faecal coliform	N/A	N/A

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Sludge / MRSL - Test items	Testing period	Sample 3: Sludge
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	N/A	N/A
Polycyclic Aromatic Hydrocarbons (PAHs)	N/A	N/A
Chlorotoluenes	N/A	N/A

Remark (Indicated in each parameter)

ND = Not detected (less than ZDHC reporting limit for MRSL parameters) / Not detected (less than lab reporting limit for other parameters)
D = Detected
N/A = Not applicable (Out of scope according to ZDHC WWSG v2.1)
NT = Not tested (Did not test according to applicant's request)
(S) = The samples were subcontracted for testing.
(T) = If sample temperature is greater than 8°C and less than 10°C when received from the laboratory.
(TT) = If sample temperature is exceeded 10°C when received from the laboratory.
@ = Maximum holding time exceeded.
(*) = Sample and report for mock leather.
(^) = Borate, zinc salt would report ND when total boron or total zinc less than 100 µg/L.
[f] = On-site test by sampler.
[a] = The local legal standard name and legal standard no. is referenced to discharge permit (or contractual agree by CETP) that provided by applicant.

This report shown the test result of the environment samples of above factory which collected on specific date and time. The results of this report shall not be used for any regulatory compliance purposes.

For and on behalf of
Intertek Testing Service Turkey Limited

Prepared and Checked By:

Eralp Anıl
Environmental Engineer
For Intertek Testing Services Turkey

Authorized By:

Emre ÇALIK
Chemical Laboratory Manager
For Intertek Testing Services Turkey

Intertek Test Hizmetleri A.S.
Merkez Mahallesi Sanayi Cad. No.23 Altindag Plaza Yenibosna 34197 - ISTANBUL / TURKEY

SOFTLINES WASTEWATER TESTING

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Number:TURA240120020

Test results

1. Conventional parameters

Wastewater/ Conventional parameters - Test items	Test method	Limit			Lab Reporting Limit	Result sample 2 (effluent)	Unit
		Foundational	Progressive	Aspirational			
Temperature	SM 2550 B	35°C	30°C	25°C	N/A	N/A	°C
Temperature difference [ºC]	SM 2550 B	Δ+15ºC	Δ+10ºC	Δ+5ºC	N/A	N/A	[f] ºC
TSS	SM 2540 D	50 mg/L	15 mg/L	5 mg/L	5 mg/L	N/A	mg/L
Chemical Oxygen Demand (COD)	SM 5220 D	150 mg/L	80 mg/L	40 mg/L	40 mg/L	N/A	mg/L
Total-N	Sum of SM4500-Norg B, SM4500-NO2- B, SM4500-NO3- E)	20 mg/L	10 mg/L	5 mg/L	5 mg/L	N/A	mg/L
pH	SM 4500-H+	6-9			N/A	N/A	[f] pH
Colour (436 nm ; 525 nm ; 620nm)	ISO 7887-B	7;5;3	5;3;2	2;1;1	N/A	N/A	[m-1]
Biochemical Oxygen Demand (BOD5)	SM 5210-B	30 mg/L	15 mg/L	8 mg/L	5 mg/L	N/A	mg/L
Ammonium-Nitrogen	SM 4500 NH3 B& F	10 mg/L	1 mg/L	0.5 mg/L	0.5 mg/L	N/A	mg/L
Total-P	EPA3015 A& ISO11885	3 mg/L	0.5 mg/L	0.1 mg/L	0.1 mg/L	N/A	mg/L
AOX	ISO 9562	3 mg/L	0.5 mg/L	0.1 mg/L	0.1 mg/L	N/A	mg/L
Oil and grease	USEPA 1664	10 mg/L	2 mg/L	0.5 mg/L	0.5 mg/L	N/A	mg/L
Phenol	SM 5530-B& C	0.5 mg/L	0.01 mg/L	0.001 mg/L	0.001 mg/L	N/A	mg/L
E. Coli	ISO 9308-1	126 [MPN/100-ml]			126 [MPN/100-ml]	N/A	[MPN/100-ml]
Foam	N/A	Not visible	Not visible	Not visible	N/A	N/A	[f]

Cyanide	SM 4500-CN-C&E	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.05 mg/L	N/A	mg/L
Sulfide	SM 4500-S2-D	0.5 mg/L	0.05 mg/L	0.01 mg/L	0.01 mg/L	N/A	mg/L
Sulphite	SM 4500 SO32 C	2 mg/L	0.5 mg/L	0.2 mg/L	0.2 mg/L	N/A	mg/L
Dissolved Oxygen (DO)	SM 4500-O-G	Sample and report only			N/A	N/A	[f] mg/L
Total Chlorine	ISO 7393-2	Sample and report only			0.2 mg/L	N/A	[f] mg/L
Total Dissolved Solids (TDS)	SM 2540-C	Sample and report only			10 mg/L	N/A	mg/L
Chloride	SM 4500-Cl C	Sample and report only			10 mg/L	N/A	mg/L
Sulfate	SM 4500 SO4 E	Sample and report only			10 mg/L	N/A	mg/L
Wastewater Flowrate	N/A	Report only			N/A	N/A	[f] m3/day

△ is the degree above ambient temperature of receiving water body.

2. Heavy metals

Others; Modified from EPA 3015A, EPA 6020B (ICP-MS analysis)
Chromium (VI); ISO 18412 (UV/VIS analysis)

Heavy metals	CAS no.	Limit			Lab Reporting limit (mg/L)	Result Sample 1 (Untreated wastewater)	Unit
		Foundational	Progressive	Aspirational			
Arsenic (As)	Various	0.05 mg/L	0.01 mg/L	0.005 mg/L	0.005 mg/L	ND	mg/L
Cadmium (Cd)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.01 mg/L	ND	mg/L
Mercury (Hg)	Various	0.01 mg/L	0.005 mg/L	0.001 mg/L	0.001 mg/L	ND	mg/L
Lead (Pb)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.01 mg/L	ND	mg/L
Antimony (Sb)	Various	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.01 mg/L	N/A	mg/L
Cobalt (Co)	Various	0.05 mg/L	0.02 mg/L	0.01 mg/L	0.01 mg/L	N/A	mg/L
Nickel (Ni)	Various	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.05 mg/L	N/A	mg/L
Silver (Ag)	Various	0.1 mg/L	0.05 mg/L	0.005 mg/L	0.005 mg/L	N/A	mg/L
Copper (Cu)	Various	1 mg/L	0.5 mg/L	0.25 mg/L	0.25 mg/L	N/A	mg/L
Zinc (Zn)	Various	5.0 mg/L	1.0 mg/L	0.5 mg/L	0.5 mg/L	N/A	mg/L
Total Chromium (Cr)	Various	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.05 mg/L	N/A	mg/L
Chromium VI (Cr VI)	Various	0.05 mg/L	0.005 mg/L	0.001 mg/L	0.001 mg/L	ND	mg/L
Barium	Various	Sample and Report only			0.001 mg/L	N/A	mg/L
Selenium	Various	Sample and Report only			0.001 mg/L	N/A	mg/L
Tin	Various	Sample and Report only			0.001 mg/L	N/A	mg/L

3.Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers.
APs&APEOs (n=1,2): modified from ISO 18857-1, ISO 18857-2, ASTM D7065) (GC-MS analysis)
APs&APEOs (n>2): modified from ISO 18254-1) (LC-MS-MS analysis)

Alkylphenols (APs) & Alkylphenolethoxylates (APEOs)	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Octylphenol (OP), mixed isomers	140-66-9/ 1806-26-4/ 27193-28-8	5	ND	µg/L
Nonylphenol (NP), mixed isomers	104-40-5/ 11066-49-2/ 25154-52-3/84852-15-3	5	ND	µg/L
Octylphenolethoxylates (OPEOs)	9002-93-1; 9036-19-5; 68987-90-6	5	ND	µg/L
Nonylphenolethoxylates (NPEOs)	9016-45-9/26027-38-3/ 37205-87-1/68412-54-4/127087-87-0	5	ND	µg/L

4. Chlorobenzenes & Chlorotoluenes
Modified from EPA 3510C, EPA 8260D, EPA 8270E (GC-MS analysis)

Chlorobenzenes & Chlorotoluenes	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Chlorobenzene	108-90-7	0.2	ND	µg/L
1,2-Dichlorobenzene	95-50-1	0.2	ND	µg/L
1,3-Dichlorobenzene	541-73-1	0.2	ND	µg/L
1,4-Dichlorobezene	106-46-7	0.2	ND	µg/L
1,2,3-Trichlorobenzene	87-61-6	0.2	ND	µg/L
1,2,4-Trichlorobenzene	120-82-1	0.2	ND	µg/L
1,3,5-Trichlorobenzene	108-70-3	0.2	ND	µg/L
1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	ND	µg/L
1,2,3,5-Tetrachlorobenzene	634-90-2	0.2	ND	µg/L
1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	ND	µg/L
Pentachlorobenzene	608-93-5	0.2	ND	µg/L
Hexachlorobenzene	118-74-1	0.2	ND	µg/L
2-Chlorotoluene	95-49-8	0.2	ND	µg/L
3-Chlorotoluene	108-41-8	0.2	ND	µg/L
4-Chlorotoluene	106-43-4	0.2	ND	µg/L
2,3-Dichlorotoluene	32768-54-0	0.2	ND	µg/L

2,4-Dichlorotoluene	95-73-8	0.2	ND	µg/L
2,5-Dichlorotoluene	19398-61-9	0.2	ND	µg/L
2,6-Dichlorotoluene	118-69-4	0.2	ND	µg/L
3,4-Dichlorotoluene	95-75-0	0.2	ND	µg/L
3,5-Dichlorotoluene	25186-47-4	0.2	ND	µg/L
2,3,4-Trichlorotoluene	7359-72-0	0.2	ND	µg/L
2,3,6-Trichlorotoluene	2077-46-5	0.2	ND	µg/L
2,4,5-Trichlorotoluene	6639-30-1	0.2	ND	µg/L
2,4,6-Trichlorotoluene	23749-65-7	0.2	ND	µg/L
3,4,5-Trichlorotoluene	21472-86-6	0.2	ND	µg/L
2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	ND	µg/L
2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	ND	µg/L
2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	ND	µg/L
Pentachlorotoluene	877-11-2	0.2	ND	µg/L

5. Chlorophenols
Modified from EPA 3510C, EPA 8270E (GC-MS analysis)

Chlorophenols	**CAS no.**	**ZDHC Reporting limit (µg/L)**	**Result Sample 1 (Untreated wastewater)**	**Unit**
2-Chlorophenol	95-57-8	0.5	ND	µg/L
3-Chlorophenol	108-43-0	0.5	ND	µg/L
4-Chlorophenol	106-48-9	0.5	ND	µg/L
2,3-Dichlorophenol	576-24-9	0.5	ND	µg/L
2,4-Dichlorophenol	120-83-2	0.5	ND	µg/L
2,5-Dichlorophenol	583-78-8	0.5	ND	µg/L
2,6-Dichlorophenol	87-65-0	0.5	ND	µg/L
3,4-Dichlorophenol	95-77-2	0.5	ND	µg/L

3,5-Dichlorophenol	591-35-5	0.5	ND	µg/L
2,3,4-Trichlorophenol	15950-66-0	0.5	ND	µg/L
2,3,5-Trichlorophenol	933-78-8	0.5	ND	µg/L
2,3,6-Trichlorophenol	933-75-5	0.5	ND	µg/L
2,4,5-Trichlorophenol	95-95-4	0.5	ND	µg/L
2,4,6-Trichlorophenol	88-06-2	0.5	ND	µg/L
3,4,5-Trichlorophenol	609-19-8	0.5	ND	µg/L
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	ND	µg/L
2,3,4,6-Tetrachlorophenol	58-90-2	0.5	ND	µg/L
2,3,5,6-Tetrachlorophenol	935-95-5	0.5	ND	µg/L
Pentachlorophenol (PCP)	87-86-5	0.5	ND	µg/L

6. Restricted Aromatic Amines (Cleavable from Azo- colourants)
Modified from EPA 3510C, ISO 14362-1 (GC-MS analysis)

Azo Dyes	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	0.1	ND	µg/L
4,4'-Diaminodiphenylmethane	101-77-9	0.1	ND	µg/L
4,4'-Oxydianiline	101-80-4	0.1	ND	µg/L
4-Chloroaniline	106-47-8	0.1	ND	µg/L
3,3'-Dimethoxybenzidine	119-90-4	0.1	ND	µg/L
3,3'-Dimethylbenzidine	119-93-7	0.1	ND	µg/L
p-Cresidine	120-71-8	0.1	ND	µg/L
2,4,5-Trimethylaniline	137-17-7	0.1	ND	µg/L
4,4'-Thiodianiline	139-65-1	0.1	ND	µg/L
4-Aminoazobenzene	60-09-3	0.1	ND	µg/L
4-methoxy-m-phenylenediamine	615-05-4	0.1	ND	µg/L
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	0.1	ND	µg/L
2,6-Xylidine	87-62-7	0.1	ND	µg/L
o-Anisidine	90-04-0	0.1	ND	µg/L
2-Naphthylamine	91-59-8	0.1	ND	µg/L
3,3'-Dichlorobenzidine	91-94-1	0.1	ND	µg/L
4-Aminobiphenyl	92-67-1	0.1	ND	µg/L
Benzidine	92-87-5	0.1	ND	µg/L
o-Toluidine	95-53-4	0.1	ND	µg/L
2,4-Xylidine	95-68-1	0.1	ND	µg/L
4-Chloro-o-toluidine	95-69-2	0.1	ND	µg/L
4-Methyl-m-phenylenediamine	95-80-7	0.1	ND	µg/L

o-Aminoazotoluene	97-56-3	0.1	ND	µg/L
5-Nitro-o-toluidine	99-55-8	0.1	ND	µg/L
2-Naphthylammoniumacetate	553-00-4	0.1	ND	µg/L
2,4,5-trimethylaniline hydrochloride	21436-97-5	0.1	ND	µg/L
4-chloro-o-toluidinium chloride	3165-93-3	0.1	ND	µg/L
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	0.1	ND	µg/L

7. Dyes – Carcinogenic or Equivalent Concern

Modified from DIN 54231 (LC-MS analysis)

Carcinogenic dyes	**CAS no.**	**ZDHC Reporting limit (µg/L)**	**Result Sample 1 (Untreated wastewater)**	**Unit**
C.I. Direct Black 38	1937-37-7	500	ND	µg/L
C.I. Direct Blue 6	2602-46-2	500	ND	µg/L
C.I. Acid Red 26	3761-53-3	500	ND	µg/L
C.I. Basic Red 9	569-61-9	500	ND	µg/L
C.I. Direct Red 28	573-58-0	500	ND	µg/L
C.I. Basic Violet 14	632-99-5	500	ND	µg/L
C.I. Disperse Blue 1	2475-45-8	500	ND	µg/L
C.I. Disperse Blue 3	2475-46-9	500	ND	µg/L
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	500	ND	µg/L
C.I. Basic Green 4 (malachite green chloride)	569-64-2	500	ND	µg/L
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	500	ND	µg/L
C.I. Basic Green 4 (malachite green)	10309-95-2	500	ND	µg/L
Disperse Orange 11	82-28-0	500	ND	µg/L
Basic violet 3 with >0.1% of Michler´s Ket	548-62-9	500	ND	µg/L

C.I. Acid Violet 49	1694-09-3	500	ND	µg/L

8. Dyes – Disperse (Allergenic)
Modified from DIN 54231 (LC-MS analysis)

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

9. Flame retardants

Brominated substances: Modified from EPA 3510C, EPA 527, ISO 22032 (GC-MS and ICP-MS analysis)
Brominated/Phosphorus substances: Modified from EPA 3510C, EPA 8321B (LC-MS-MS analysis)

Flame retardants	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	25	ND	µg/L
Decabromodiphenyl ether (DecaBDE)	1163-19-5	25	ND	µg/L
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	25	ND	µg/L
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	ND	µg/L
Octabromodiphenyl ether (OctaBDE)	32536-52-0	25	ND	µg/L
Bis(2,3-dibromopropyl) phosphate	5412-25-9	25	ND	µg/L
Tris(1-aziridinyl)phosphine oxide) (TEPA)	545-55-1	25	ND	µg/L
Polybromobiphenyls (PBBs)	59536-65-1	25	ND	µg/L
Tetrabromobisphenol A (TBBPA)	79-94-7	25	ND	µg/L
Hexabromocyclododecane (HBCDD)	3194-55-6	25	ND	µg/L
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	25	ND	µg/L
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	25	ND	µg/L
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	ND	µg/L
Decabromobiphenyl (DecaBB)	13654-09-6	25	ND	µg/L
Dibromobiphenyls (DiBB)	Various	25	ND	µg/L
Octabromobiphenyls (OctaBB)	Various	25	ND	µg/L
Dibromopropylether	21850-44-2	25	ND	µg/L
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	ND	µg/L
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	ND	µg/L

Monobromobiphenyls (MonoBB)	Various	25	ND	µg/L
Monobromodiphenylethers (MonoBDEs)	Various	25	ND	µg/L
Nonabromobiphenyls (NonaBB)	Various	25	ND	µg/L
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	ND	µg/L
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	ND	µg/L
Tribromodiphenylethers (TriBDEs)	Various	25	ND	µg/L
Boric acid**	10043-35-3 / 11113-50-1	100 in Boron	ND	µg/L
Diboron trioxide**	1303-86-2	100 in Boron	ND	µg/L
Disodium octaborate**	12008-41-2	100 in Boron	ND	µg/L
Disodium tetraborate anhydrous**	1303-96-4 / 1330-43-4	100 in Boron	ND	µg/L
Tetraboron disodium heptaoxide, hydrate**	12267-73-1	100 in Boron	ND	µg/L

** Report total boron directly, no conversion from Boron salt.

10. Glycols
Modified from EPA 3510C (GC-MS analysis)

Glycols	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Bis(2-methoxyethyl)-ether	111-96-6	50	ND	µg/L
2-ethoxyethanol	110-80-5	50	ND	µg/L
2-ethoxyethyl acetate	111-15-9	50	ND	µg/L
Ethylene glycol dimethyl ether	110-71-4	50	ND	µg/L
2-methoxyethanol	109-86-4	50	ND	µg/L
2-methoxyethylacetate	110-49-6	50	ND	µg/L
2-methoxypropylacetate	70657-70-4	50	ND	µg/L
Triethylene glycol dimethyl ether	112-49-2	50	ND	µg/L

11.Halogenated solvents
Modified from EPA 8260D, EPA 5021A (GC-MS analysis)

Chlorinated solvents	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
1,2-Dichloroethane	107-06-2	1	ND	µg/L
Methylene chloride	75-09-2	1	ND	µg/L
Trichloroethene	79-01-6	1	ND	µg/L
Tetrachloroethene	127-18-4	1	ND	µg/L

12. Organotin compounds
Modified from EPA 3510C, ISO 17353 (GC-MS analysis)

Organotin compounds	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Mono-, di-and tri-methyltin derivatives	Various	0.01	ND	µg/L
Mono-, di-and tri-butyltin derivatives	Various	0.01	ND	µg/L
Mono-, di-and tri-phenyltin derivatives	Various	0.01	ND	µg/L
Mono-, di-and tri-octyltin derivatives	Various	0.01	ND	µg/L
Triclyclohexyltin (TCyHT)	Various	0.01	ND	µg/L
Dipropyltin compounds (DPT)	Various	0.01	ND	µg/L
Tetrabutyltin compounds (TeBT)	Various	0.01	ND	µg/L
Tripropyltin Compounds (TPT)	Various	0.01	ND	µg/L

Tetraoctyltin compounds (TeOT)	Various	0.01	ND	µg/L
Tetraethyltin Compounds (TeET)	Various	0.01	ND	µg/L

13. Phthalates
Modified from EPA 3510C, EPA 8270E, ISO 18856, ISO 14389 (GC-MS analysis)

Phthalates	**CAS no.**	**ZDHC Reporting limit (µg/L)**	**Result Sample 1 (Untreated wastewater)**	**Unit**
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	10	ND	µg/L
Dimethoxyethyl phthalate (DMEP)	117-82-8	10	ND	µg/L
Di-n-octyl phthalate (DNOP)	117-84-0	10	ND	µg/L
Di-iso-decyl phthalate (DIDP)	26761-40-0/68515-49-1	10	ND	µg/L
Di-iso-nonyl phthalate (DINP)	28553-12-0/68515-48-0	10	ND	µg/L
Di-n-hexyl phthalate (DnHP)	84-75-3	10	ND	µg/L
Dibutyl phthalate (DBP)	84-74-2	10	ND	µg/L
Butyl benzyl phthalate (BBP)	85-68-7	10	ND	µg/L
Diethyl phthalate (DEP)	84-66-2	10	ND	µg/L
Di-n-propyl phthalate (DPRP)	131-16-8	10	ND	µg/L
Di-iso-butyl phthalate (DIBP)	84-69-5	10	ND	µg/L
Di-cyclohexyl phthalate (DCHP)	84-61-7	10	ND	µg/L
Di-iso-octyl phthalate (DIOP)	27554-26-3	10	ND	µg/L
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearakyl esters (DHNUP)	68515-42-4	10	ND	µg/L
1,2-benzenedicarboxylic acid, di-C6-11-branched alkyl esters, C7-rich (DIHP)	71888-89-6	10	ND	µg/L
Di-n-pentylphthalates	131-18-0	10	ND	µg/L
Diisopentylphthalates	605-50-5	10	ND	µg/L
Dinonyl phthalate (DNP)	84-76-4	10	ND	µg/L

14. Perfluorinated chemicals (PFCs)

PFCs: Modified from DIN 38407-42, CEN/TS 15968 (LC-MS-MS analysis)
FTOH: Modified from EPA 3510C, CEN/TS 15968, Journal of Chromatography A, 1178 (2008) 199-205 (GC-MS analysis)

Perfluorinated chemicals (PFCs)	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Perfluoro-octanoic acid (PFOA)	335-67-1	0.01	ND	µg/L
Perfluoro-octane-sulfonic acid (L-PFOS)	1763-23-1	0.01	ND	µg/L
Perfluoro-octane-sulfon-amide (PFOSA)	754-91-6	0.01	ND	µg/L
N-Methyl-perfluoro-octane-sulfon-amide (N-Me-FOSA)	31506-32-8	0.01	ND	µg/L
N-Ethyl-perfluoro-octane-sulfon-amide (N-Et-FOSA)	4151-50-2	0.01	ND	µg/L
N-Methyl-perfluoro-octane-sulfon-amido-ethanol (N-Me-FOSE alcohol)	24448-09-7	0.01	ND	µg/L
N-Ethyl-Perfluoro-octane-sulfon-amido-ethanol (N-Et-FOSE alcohol)	1691-99-2	0.01	ND	µg/L
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	1	ND	µg/L
2-Perfluorooctylethanol (8:2 FTOH)	678-39-7	1	ND	µg/L
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	1	ND	µg/L
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	1	ND	µg/L
Methyl perfluorooctanoate (Me-PFOA)	376-27-2	1	ND	µg/L
Ethyl perfluorooctanoate Et-PFOA	3108-24-5	1	ND	µg/L

15. Polycyclic aromatic hydrocarbons (PAHs)

Modified from EPA 3510C, EPA 8270E, DIN 38407-39 (GC-MS analysis).

Polycyclic aromatic hydrocarbons (PAHs)	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Benzo(a)pyrene (BaP)	50-32-8	1	ND	µg/L
Anthracene	120-12-7	1	ND	µg/L
Pyrene	129-00-0	1	ND	µg/L
Benzo(ghi)perylene	191-24-2	1	ND	µg/L
Benzo(e)pyrene	192-97-2	1	ND	µg/L
Indeno (1,2,3-cd)pyrene	193-39-5	1	ND	µg/L
Benzo(j)fluoranthene	205-82-3	1	ND	µg/L
Benzo(b)fluoranthene	205-99-2	1	ND	µg/L
Fluoranthene	206-44-0	1	ND	µg/L
Benzo(k)fluoranthene	207-08-09	1	ND	µg/L
Acenaphthylene	208-96-8	1	ND	µg/L

Chrysene	218-01-9	1	ND	µg/L
Dibenz(a,h)anthracene	53-70-3	1	ND	µg/L
Benzo(a)anthracene	56-55-3	1	ND	µg/L
Acenaphthene	83-32-9	1	ND	µg/L
Phenanthrene	85-01-8	1	ND	µg/L
Fluorene	86-73-7	1	ND	µg/L
Naphthalene	91-20-3	1	ND	µg/L

16. Volatile organic compounds (VOCs)

Modified from EPA 8260D, EPA 5021A (GC-MS analysis)

Volatile organic compounds (VOCs)	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Benzene	71-43-2	1	ND	µg/L
Xylene	1330-20-7	1	ND	µg/L
o-cresol	95-48-7	1	ND	µg/L
p-cresol	106-44-5	1	ND	µg/L
m-cresol	108-39-4	1	ND	µg/L
Toluene*	108-88-3	1	ND	µg/L

(*) = Sample and report for mock leather.

17. Anti - Microbials & Biocides

Modified from EPA 3510C, EPA 8270E (GC-MS analysis)

Anti - Microbials & Biocides	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
o-Phenylphenol (+salts)	90-43-7	100	ND	µg/L
Triclosan	3380-34-5	100	ND	µg/L
Permethrin	Multiple	500	ND	µg/L

18. Chlorinated paraffins
Modified from EPA 3510C, ISO 1201 (GC-ECNI-MS analysis)

Chlorinated paraffins	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Short-chain Chlorinated paraffin (C10 – C13)	85535-84-8	25	ND	µg/L
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	500	ND	µg/L

19. Dimethyl Formamide (DMFa) (*)
Modified from DIN 54439 (GC-MS analysis)

N,N-di-methylformamide (DMFa)	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Dimethyl formamide; N,N-dimethylformamide	68-12-2	1000	ND	µg/L

(*) = Sample and report for mock leather.

20. Dyes-Navy Blue Colourant
Modified from DIN 54231 (LC-MS analysis)

Dyes-Navy Blue Colourant	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	500	ND	µg/L
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	500	ND	µg/L

21. Other/Miscellaneous Chemicals (^)
Others: Micro filtration method (LC-MS-MS analysis)
AEAA: Liquid-liquid extraction (LC-MS-MS analysis)
Quinoline: Modified from DIN 54231 (LC-MS-MS analysis)
Borate salt: Modified from EPA 3015A ve EPA 6020B (ICP-MS analysis)

Other/Miscellaneous Chemicals	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
AEEA [2-(2-aminoethylamino)ethanol]	111-41-1	500	ND	µg/L
Bisphenol A	80-05-7	10	ND	µg/L
Thiourea	62-56-6	50	ND	µg/L
Quinoline	91-22-5	50	ND	µg/L
Borate, zinc salt (^^)	12767-90-7	100 in Boron & 100 in Zinc	Boron:ND Zinc:ND	µg/L

^^ = Report total boron & total zinc individually, and no conversion from boron / zinc salt.

22. UV Absorbers
Liquid-Liquid extraction (GC-MS analysis)

UV Absorbers	CAS no.	ZDHC Reporting limit (µg/L)	Result Sample 1 (Untreated wastewater)	Unit
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec- butyl) phenol(UV-350)	36437-37-3	100	ND	µg/L
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	100	ND	µg/L
2-benzotriazol-2-yl-4,6-di-tertbutylphenc	3846-71-7	100	ND	µg/L
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	100	ND	µg/L

23. Sludge Parameters – Step 1 - Metals

Others: Modified from EPA 3051A, ISO 17294-2, EPA 6020B (ICP-MS analysis)
Chromium VI: Modified from ISO 18412, TS EN ISO 18412 (UV/VIS analysis)

Sludge Parameters – Step 1 - Metals	ZDHC reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
Antimony	5	N/A	mg/kg
Arsenic	5	N/A	mg/kg
Barium	200	N/A	mg/kg
Cadmium	1	N/A	mg/kg
Cobalt	400	N/A	mg/kg
Copper	50	N/A	mg/kg
Lead	5	N/A	mg/kg
Nickel	20	N/A	mg/kg
Selenium	5	N/A	mg/kg
Silver	50	N/A	mg/kg
Total Chromium	50	N/A	mg/kg
Zinc	400	N/A	mg/kg
Chromium (VI)	20	N/A	mg/kg
Mercury	1	N/A	mg/kg

24. Sludge Parameters – Step 1 - Anions
USEPA 9013 A, USEPA 9014 (UV/VIS analysis)

Sludge Parameters – Step 1 - Anions	ZDHC reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
Cyanide	20	N/A	mg/kg

25. Sludge Parameteres - Step 1 – Conventional

Sludge Parameters – Step 1 - Convention	Test method	Lab reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
pH	USEPA SW 9045D	N/A	N/A	N/A
% Solids	USEPA 160.3	N/A	N/A	%
Paint Filter Test	USEPA 9095B	N/A	N/A	N/A
Fecal Coliform	ISO 7899-2	10 MPN/g	N/A	MPN/g

^ - Report “Pass” when Paint Filter Test does not contain free liquid; Report “Fail” when Paint Filter Test does contain free liquid.

26. Sludge Parameteres - Step 1 - MRSL - Alkylphenol (AP)and Alkylphenol Ethoxylates (APEOs): including all isomers.
APs/APEOs (n=1,2): Modified from EPA 3540C, ISO 18857-2 (GC-MS analysis)
APs/APEOs (n>2): Modified from EPA 3550C, ISO 18254-1 (LC-MS-MS analysis)

Sludge Parameters - Step 1 - MRSL - Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
Nonylphenol ethoxylates (NPEO)	9016-45-9; 26027-38-3; 37205-87-1; 68412-54-4; 127087-87-0	0.4	N/A	mg/kg
Nonylphenol (NP), mixed isomers	104-40-5; 11066-49-2; 25154-52-3; 84852-15-3	0.4	N/A	mg/kg
Octylphenol ethoxylates (OPEO)	9002-93-1; 9036-19-5; 68987-90-6	0.4	N/A	mg/kg
Octylphenol (OP), mixed isomers	140-66-9; 1806-26-4; 27193-28-8	0.4	N/A	mg/kg

27. Sludge Parameteres - Step 1 - MRSL - PolycyclicAromatic Hydrocarbons (PAHs)
Modified from EPA 3540C, EPA 8270E, DIN 38407-39 (GC-MS analysis)

Sludge Parameteres - Step 1 - MRSL - Polycyclic Aromatic Hydrocarbons (PAHs)	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
Acenaphthene	83-32-9	0.2	N/A	mg/kg
Acenaphthylene	208-96-8	0.2	N/A	mg/kg
Anthracene	120-12-7	0.2	N/A	mg/kg
Benzo[a]anthracene	56-55-3	0.2	N/A	mg/kg
Benzo[a]pyrene (BaP)	50-32-8	0.2	N/A	mg/kg
Benzo[b]fluoranthene	205-99-2	0.2	N/A	mg/kg
Benzo[e]pyrene	192-97-2	0.2	N/A	mg/kg
Benzo[ghi]perylene	191-24-2	0.2	N/A	mg/kg
Benzo[j]fluoranthene	205-82-3	0.2	N/A	mg/kg
Benzo[k]fluoranthene	207-08-9	0.2	N/A	mg/kg
Chrysene	218-01-9	0.2	N/A	mg/kg
Dibenz[a,h]anthracene	53-70-3	0.2	N/A	mg/kg
Fluoranthene	206-44-0	0.2	N/A	mg/kg
Fluorene	86-73-7	0.2	N/A	mg/kg
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	N/A	mg/kg
Naphthalene	91-20-3	0.2	N/A	mg/kg
Phenanthrene	85-01-8	0.2	N/A	mg/kg
Pyrene	129-00-0	0.2	N/A	mg/kg

28. Sludge Parameteres - Step 1 - MRSL – Chlorotoluenes

Modified from EPA 3510C, EPA 8260D, EPA 8270E (GC-MS analysis)

Sludge Parameteres - Step 1 - MRSL – Chlorotoluenes	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Result Sample 3 (Sludge - Dry weight))	Unit
2-Chlorotoluene	95-49-8	0.2	N/A	mg/kg
3-Chlorotoluene	108-41-8	0.2	N/A	mg/kg
4-Chlorotoluene	106-43-4	0.2	N/A	mg/kg
2,3-Dichlorotoluene	32768-54-0	0.2	N/A	mg/kg
2,4-Dichlorotoluene	95-73-8	0.2	N/A	mg/kg
2,5-Dichlorotoluene	19398-61-9	0.2	N/A	mg/kg
2,6-Dichlorotoluene	118-69-4	0.2	N/A	mg/kg
3,4-Dichlorotoluene	95-75-0	0.2	N/A	mg/kg
3,5-Dichlorotoluene	25186-47-4	0.2	N/A	mg/kg
2,3,4-Trichlorotoluene	7359-72-0	0.2	N/A	mg/kg
2,3,6-Trichlorotoluene	2077-46-5	0.2	N/A	mg/kg
2,4,5-Trichlorotoluene	6639-30-1	0.2	N/A	mg/kg
2,4,6-Trichlorotoluene	23749-65-7	0.2	N/A	mg/kg
3,4,5-Trichlorotoluene	21472-86-6	0.2	N/A	mg/kg
2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	N/A	mg/kg
2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	N/A	mg/kg
2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	N/A	mg/kg
Pentachlorotoluene	877-11-2	0.2	N/A	mg/kg

29. Sludge Parameteres - Step 2 – Metals
Others: EPA 1311, ISO 17294-2(ICP-MS analysis)
Chromium VI: EPA 1311, ISO 18412 (UV/VIS analysis)

Sludge Parameteres - Step 2 – Metals	Lab Reporting limit (mg/L)	Result Sample 3 (Sludge)	Unit
Antimony	0.12	N/A	mg/L
Arsenic	0.1	N/A	mg/L
Barium	7	N/A	mg/L
Cadmium	0.03	N/A	mg/L
Cobalt	16	N/A	mg/L
Copper	2	N/A	mg/L
Lead	0.1	N/A	mg/L
Nickel	0.7	N/A	mg/L
Selenium	0.1	N/A	mg/L
Silver	1	N/A	mg/L
Total Chromium	1	N/A	mg/L
Zinc	10	N/A	mg/L
Chromium (VI)	0.5	N/A	mg/L
Mercury	0.01	N/A	mg/L

Appendix 1: Reference to ZDHC WWSG v2.1 Table 4B

Parameters		Disposal pathways						
	Total metals and anions threshold values (mg/kg)	A and B (Leachate result in mg/L)	C (Leachate result in mg/L)	D (Leachate result in mg/L)	E (Leachate result in mg/L)	F (Leachate result in mg/L)	G (Leachate result in mg/L)	G (Total metals limit in mg/kg)
Arsenic	10	Report only if required to test	5	2.75	0.5	0.5	0.5	75
Cadmium	3		1	0.58	0.15	0.15	0.15	85
Total Chromium	100		15	10	5	5	5	3000
Lead	10		5	2.75	0.5	0.5	0.5	840
Antimony	12		15	7.8	0.6	0.6	0.6	Sample and report only
Barium	700		100	67.5	35	35	35	
Cobalt	1600		80	80	80	80	80	
Copper	200		25	17.5	10	10	10	4300
Nickel	70		20	11.75	3.5	3.5	3.5	420
Selenium	10		1	0.75	0.5	0.5	0.5	100
Silver	100		5	5	5	5	5	Sample and report only
Zinc	1000		250	150	50	50	50	7500
Chromium VI	50		5	3.75	2.5	2.5	2.5	50
Mercury	1		0.2	0.125	0.05	0.05	0.05	57

Appendix 2: reference to ZDHC WWSG v2.1 Table 4C

Parameters	Disposal pathways					
	A and B	C	D	E	F	G
pH	Sample and report only	5 – 11 s.u.	5 – 11 s.u.	5 – 11 s.u.	6.5 – 9 s.u.	6.5 – 9 s.u.
% Solids		Sample and report only	Sample and report only	Sample and report only	Sample and report only	Sample and report only
Fecal Coliform					< 1000 (MPN/g)	
Paint Filter Test			Pass Paint filter test			Sample and report only
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers			< 0.4 mg/kg			
Polycyclic Aromatic Hydrocarbons (PAHs)			< 0.2 mg/kg			
Chlorotoluenes						

Appendix 2: reference to ZDHC WWSG v2.1 Table 4D

Parameters	Disposal pathways					
	A and B	C	D	E	F	G
Cyanide	Report only if required to test	100 mg/kg	85 mg/kg	70 mg/kg	70 mg/kg	70 mg/kg

Photo of sampling points:

Photo of wastewater before treatment (untreated)
15/10/2024, 10:15

X	X
Photo of effluent -	**Photo of sludge** -

Photo of samples:

Photo of untreated wastewater
16/10/2024, 08:00

X	X
Photo of effluent -	**Photo of sludge** -

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ZDHC İzleme / *Monitoring*

Atıksu ve Çamur Numune Alım Tutanağı, ZDHC SAP 2.1'e göre Ek-E dahil.
***Sampling Protocol** for Wastewater and Sludge acc. ZDHC SAP 2.1 incl. Apdx. E*

Firma Adı *Facility Name:*	Marmara Boyama Apre ve Baskı Sanayi A.Ş
Adres ve İlgili *Address and Contact:*	Yakıflar OSB mah. Sanayi Cad No:19 Ergene/Tekirdağ

Firma Türü *Facility Type:*	☑ Boya & Apre *Dyeing & Finishing*	☑ Kumaş Fabrikası *Fabric Mill*	☐ Yıkama & Apre *Washing & Finishing*	☐ Doğal Deri İşleme *Natural Leather proc.*	☑ Baskı *Printing*	☐ Yapay Deri İşleme *Synthetic Leather proc.*

Numune Alım Tarihi *Date of sampling:*	15.10.2024			
Genel Numune Kodu *Sample General ID* (Eğer Varsa / *If Available*):	☐ Direkt Deşarj / *Direct Discharge* ☑ Dolaylı Deşarj / *Indirect Discharge* ☐ Sıfır Sıvı Deşarjı / *Zero Liquid Discharge* (ZLD) ☐ Sentetik Selülozik Elyaf / MMCF	☑ Arıtmasız / *Without Treatment* ☐ Ön Arıtmalı / *With Pre-treatment* ☐ Arıtma Tesisi Var / *With Own ETP*	Deşarj Yeri / *Discharge to*: Ergene 1 OSB	
Deşarj Tanımı *Discharge Description:*	Boyama işlemi Sonrası deşarj			
Hava Durumu *Weather Conditions:*	Numune Alım Gününde / *On Sampling Day:* Güneşli	Önceki Gün / *On Day Before:* Güneşli		

Numune Türü ve Detayları (ayrıca 2. Sayfaya bakın) / *Sample Type and Details (also see page 2)*

☑ **Atıksu Deşarjı** / *Effluent Discharge*

○ **Direkt** / *Direct:* Numune alım zamanlarını ve saha ölçümlerini sayfa 2'deki numune detaylarına yazınız. *Enter sampling times in sample details (page 2), and measure field parameters.*

veya/ *or* ○ **Dolaylı** / *Indirect*: Numune alım zamanlarını yazınız. Talep harici saha ölçümleri gerekli değildir. *Enter sampling time(s) for Indirect discharge. Field parameters are not required, except on client's request.*

○AAT var/ *Facility has WWTP*
○Tesis çalışır durumda/ *Plant is in operating condition*

◇**Dengeleme Tankı (DT) Mevcut**/*with Equalisation Tank (EQT) Present:*
Hidrolik Bekleme Süresi (HBS) / *Hydraulic Retention Time (HRT)* : 16 **saat** *h* (= Tank Hacmi *Volume of tank* [m³] / Debi *Flow Rate* [m³/h])
HRT >12 saat ise numune alımı yapılır.)
If HRT > 12h, grab sampling from EQT is allowed.

☐ **Ön arıtılmış Atıksu, Çamursuz** /*Pre-treated WW without sludge*

☑ **Arıtılmamış Atıksu** / *Untreated Wastewater*
◇**DT Mevcut**/*with EQT*::**HBS** / *HRT* : ..... saat
HRT >12 saat ise numune alımı yapılır.
If HRT > 12h, grab sampling from EQT is allowed.

☐ **Tesis Kullanım Suyu** / *Incoming Water*

☐ **Sentetik Selülozik Elyaf** / MMCF

☐ **Çamur** seçilen bertaraf yoluyla* *Sludge with below disposal pathway:* Çamur Yaşı / *Age of Sludge:* ..... gün/ hafta (*days/ weeks*)

○ A	○ B	○ C	○ D	○ E	○ F	○ G
>1000 °C Harici Yakma Tesisi *>1000 °C Offsite Incineration)*	Kontrollü Düzenli Depolama Sahası *Landfill with Significant Control*	>1000 °C Yapı Malzemesi Üretim Prosesi *Building products processed >1000 °C*	Sınırlı Kontrollü Düzenli Depolama Sahası *Landfill with Limited Control*	<1000 °C Yapı Malzemesi Üretim Prosesi / Yakma *Incineration / Building Products Processed <1000 C*	Düzensiz Depolama Sahası *Landfill with No Control*	Arazi Islahı *Land Application*

*Eğer bertaraf yolu bilgisi sağlanmazsa, bertaraf yolu 'F' olarak kabul edilir. *if supplier cannot provide information, pathway "F" shall be assumed.*

Üretilen Çamur Hacmi: ..... *Sludge Volume Produced* ○m³/saat *(m³/h)* ○L/saniye *(L/sn)* ○Diğer Birim (Belirtiniz) *Other Unit (Specify):* ..... ○ Firmadan Alınan Bilgi *Per Facility Info* ○ Ölçülen *Measured* ○ Tahmini *Estimated*

☐ **Proses Kimyasalları** Process Chemical ○ Sıvı *Liquid* ○ Katı (Toz / Granül / Parçacıklı) *Solid (Powder / Granulate / Pieces)* ◇ 'İşlemden' *'In Process'* ◇ Depo / Stoktan *From Warehouse / Storage*

Numune Alım Zamanları *Times of Sampling*								
Arıtılmamış Atıksu *Untreated*	1 10:15	2 11:15	3 12:15	4 13:15	5 14:15	6 15:15	7 16:15	Veya Anlık *or Grab:*
Dolaylı Deşarj *Effluent Indirect:*	1	2	3	4	5	6	7	Veya Anlık *or Grab:*
Kullanım Suyu *Incoming:*	1	2	3	4	5	6	7	Veya Anlık *or Grab:*
Sıvı Çamur *Liquid Sludge:*	1	2	3	4	5	6	7	Kuru Çamur *Solid Sludge:*

Fotoğraf No. (veya Tarih & Saat / Aralık) *Picture ID (or Date & Time / Interval):*	**Numune Alım Noktalarının GPS Koordinatları** *GPS Coordinates of Sampling Points:*	
	Tesis Kullanım Suyu / *Incoming W.:*	Lat.: ON OS — Long.: OE OW —
	Arıtılmamış Atıksu/ *Untreated WW:*	Lat.: ON OS 41.275316 Long.: OE OW 27.593387
	Deşarj/ *Effluent*:	Lat.: ON OS — Long.: OE OW —
	Çamur/ *Sludge*:	Lat.: ON OS — Long.: OE OW —

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ZDHC İzleme / *Monitoring*

Numune Detayları *Sample Details*	Saha ölçüm parametreleri sadece **direkt deşarj** için gereklidir. Ancak dolaylı deşarj için talep varsa bu alan kullanılmalıdır. *Field parameters usually are required only for **direct discharge**. If client requests also for indirect discharge, use below fields.*							
☑ **Kompozit Numune Alım** *Composite Sample*	☐ Anlık Numune Alım (Ortalama değer kolonunu kullanın) *Grab Sample (Use column for Averaged Readings and fields at right)*					Alınan Numunelerin Hacmi *Volume of Aliquot(s):* 20.000 mL		
Numune Alma Zamanları *Time of Taking Discrete Sample*	1	2	3	4	5	6	7	**Ortalama Değerler veya Anlık Numune Ölçümleri** *Avg.Readings or Grab Sample:*
pH:								
Sıcaklık *Temp. of* **Atıksu Deşarj** *WW Discharge*	°C	°C	°C	°C	°C	°C	°C	°C
Alıcı Ortam *Receiving Water*	°C	°C	°C	°C	°C	°C	°C	°C
Debi *Flow Rate:*	m^3/sa.*(h)*	m^3/sa.*(h)*	m^3/sa.*(h)*	m^3/sa.*(h)*	m^3/sa.*(h)*	m^3/sa.*(h)*	m^3/sa.*(h)*	800 m^3/gün*(d)*
Çözünmüş Oksijen *Dissolved Oxygen:*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Toplam Klor *Total Chlorine:*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Kalıcı Köpük *Persistent Foam:*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*

Numune adedi yedi'den fazla ve eğer yukarıdaki alan yeterli gelmezse, yorumlar kısmını kullanın.
Use comment field if number of samples is greater than seven, or if above fields are otherwise not sufficient.

Numune Alım Metodu *Sampling Technique:* ○ Otomatik Numune Alım *Automated Sampling* ○ Beher ile *With Beaker* ○ Diğer *Other:* .....

Atıksu Debi Bilgisi (Deşarj) *Wastewater Flow Data (Effluent / Discharge)*

Ölçüm Sistemi *System:*	☐ Debi Metre (Firmanın) *Flow Meter (In Facility)*	☐ Boru (O) *Pipe*	☐ Su yolu (U) *Flume*	☐ V Çentikli Savak (V) *Wier*
Çap *[cm] Diameter*				
Su Derinliği *[cm] Water Depth*				
Akış Hızı [cm/sec] *Flow Speed*				

Genel Saha Parametreleri ve Duyusal Veriler (mümkün olduğu kadar) *General Field Parameters and Sensory Data (as far as applicable)*

Type	**Ortam Sıcaklığı/** *T ambient air* **[°C]**	**Koku/** *Odour*	**Colour/** *Renk*	**Köpük/** *Foam*	**Yüzer Madde/** *Floating Matter*
Kullanım *Incoming*	–	–	–	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*
Arıtılmamış *Untreated*	28°C	Yok	Gri	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*
Deşarj *Effluent*	–	–	–	○ Var / *Yes* ○ Yok / *No*	○ Var / *Yes* ○ Yok / *No*
Çamur *Sludge*	–	–	–		

Saha Kalite Kontrol Çalışması *Field Testing QA/QC*

Parametre *Parameter*	**Lab. Kontrol Numunesi Hedef Değer** *Lab. Control Sample Target Value*	**Lab. Kontrol Numunesi Ölçülen Değer** *Lab. Control Sample Measured Value*	**Doğruluk [%]** *Accuracy*
pH	–	–	–
Toplam Klor / *Total Chlorine*	–	–	–

Diğer Gözlemler/ *Other Observations:*
Firma 3 vardiya sistemi ile çalışmaktadır. Boya, baskı işlemi sonrası havuza (700)m³ alınıyor. Burda pompaya OSB değeri mevcut. (Firma beyanı)

İlave Yorumlar (ör., kullanılan kısaltmalar, alternatif olarak ölçülen debi ve okumalar, vb.)
Additional Comments (e.g., abbreviations used, alternatively measured flow and readings, etc.):
İlave yorum yoktur.

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ZDHC İzleme / *Monitoring*

ZDHC Atıksu Numune Alımı - Firma Onayı *ZDHC Wastewater Sampling - Facility Confirmation*

Atıksu numuneleri firmanın normal üretim düzeni ve atıksu deşarjı kapsamında alınmıştır. Aşağıda belirtilen numune alım personeli sahada bulunarak numuneleri toplamıştır.

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.

Numune Alım Personeli (Ad-Soyad & E-posta Adresi)
Sampling Person (Name & E-mail Address):

Hasan İRENCİ
hasan.irenci@intertek.com

Firma İsmi
Facility Name:

Marmara Boyama Apre ve Baskı San. ve Tic. A.Ş.

Numune Alım Personeli ZDHC Akreditasyon Numarası
Sampler's ZDHC Accreditation No.:

ZDHC-A-22-E-C-01068-R21CD-FA2D9

Firma Temsilcisi Ad-Soyad
Facility's Representative Name:

SELAY ALMALI

Numune Alım Personeli İmza
Sampler's Signature:

Firma Temsilcisi İmza ve Firma Kaşesi
Facility's Representative Signature and Stamp:

MARMARA BOYAMA APRE VE BASKI SANAYİ ANONİM ŞİRKETİ
Vakıflar Osb Mah. Sanayi Cad. No: 17 Ergene / TEKİRDAĞ
Çorlu V.D.: 6121377548 Tekirdağ Ticaret ve San. Odası: 020185
Mersis No: 0612 1377 5480 0001

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Document on sludge disposal or licensed third-party waste contractor for sludge disposal.

Not Applicable

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End of report