



BUREAU
VERITAS

LAB REPORT

Report Number	(7223)153-0020
Date of sampling	30/05/2023
Reporting Date	16/06/2023

Audit ID	142998	Audit firm	Bureau Veritas – TURKEY
Company name	ATB-ACAB TEXT DE BARCELOS, LDA		
Contact person	Sofia Vilas Boas		
Type of tax - tax ID no	501638733		
Address	Rua Afonso Nunes De Mariz, Nº 1, Apartado 347 - Mariz		
Region state province	Barcelos		
Town city / village	Barcelos		
Zip/Post code	4750-571		

Type of wastewater discharge	
Type of waste discharge	Indirect Discharge
Description of the discharge	ADB – Águas de Barcelos, S.A
Ambient temperature of receiving water body (direct discharge only):	Not Applicable

Sampler accreditation certification number (ZDHC):	C74D106818086
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Sample description			
	Simple	Composite	Comments
(1) Wastewater before treatment	NO	YES, [Dark Grey, Dark Wine composite sample at 09:46, 10:46, 11:46, 12:46, 13:46, 14:46]	
(2) Wastewater after treatment	NO	NO	
(3) Sludge	NO	NO	

Bureau Veritas Consumer Products Services, Inc. Yalçın Koreş Caddesi
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Local Legal Data	
Local Legal Standard name [a]	ADB – Águas de Barcelos, S.A (Annex C)
Parameters (ZDHC WWG V2.1, Table 2 & 3) exceeded local regulation:	No exceeded
Discharge permit provided	YES
Discharge flow data	>15 m ³ /day

Internal description – Final Test Report	
Internal codification number	(7223)153-0220
Reference sample number	Sample 1 for Before Treatment
Received on	02/06/2023
Analysis carried out from	02/06/2023 to 06/06/2023
Arrival Temperature at Lab	9 °C
Comments	Parameters exceeded handling temperature.
Reporting date	16/06/2023

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

General enquiry and invoicing

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Technical enquiry-Chemical

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

The sampling is agreed with client. Sampling procedure refers to ZDHC Wastewater and Sludge Laboratory Sampling and Analysis Plan.

BUREAU VERITAS CONSUMER PRODUCTS SERVICES TEST LABORATUVARLARI LTD. STI

Reviewed by:

Approved by:

Sabiha Yazici
SCM Technical Lead

Hasan Altingul
DEPUTY OPERATIONS MANAGER

Summary of test results				
Test items	Sample 1 (Before treatment)	Sample 2 (After treatment)	Sample 3 (Sludge)	Sample 4 (Leachate)
Global effluent parameters ZDHC	NA	NA	NA	NA
Heavy metals	ND	NA	NA	NA
Alkylphenols (APs) & Alkylphenol ethoxylates (APEOs)	ND	NA	NA	NA
Chlorobenzenes & Chlorotoluenes	ND	NA	NA	NA
Chlorophenols	ND	NA	NA	NA
Restricted Aromatic Amines (Cleavable from Azo-colourants)	ND	NA	NA	NA
Dyes – Carcinogenic or Equivalent Concern	ND	NA	NA	NA
Dyes – Disperse (Sensitising)	ND	NA	NA	NA
Flame retardants	ND	NA	NA	NA
Glycols	ND	NA	NA	NA
Halogenated Solvents	ND	NA	NA	NA
Organotin compounds	ND	NA	NA	NA
Phthalates	ND	NA	NA	NA
Perfluorinated and Polyfluorinated Chemicals (PFCs)	ND	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (PAHs)	ND	NA	NA	NA
Volatile Organic Compounds (VOCs)	ND	NA	NA	NA
Anti-Microbials & Biocides	ND	NA	NA	NA
Chlorinated Parafins	ND	NA	NA	NA
N,N-di-methylformamide (DMFa)	ND	NA	NA	NA
Dyes – Navy Blue Colourant	ND	NA	NA	NA
Other / Miscellaneous Chemicals	ND	NA	NA	NA
UV Absorbers	ND	NA	NA	NA

Remark (Indicated in each parameter)

ND	=	Not detected	NA	=	Not applicable
D	=	Detected	-	=	Did not perform
*	=	See remark	(f)	=	Parameter tested in field
@	=	Maximum holding time exceeded, Red flag in the ZDHC Gateway – Wastewater Module. Probable error in results due to the holding time.	(T)	=	Handling temperature exceeded
#	=	Non accredited parameter	(S)	=	Analysis was subcontracted for testing
[a]	=	The local legal standard name and legal standard number is referenced to discharge permit (or contractual agree by CETP) that provided by company.			

Test results

1. Global effluent parameters

Parameters	Test Method	Limit			Reporting limit	Result Sample 1 (Before Treatment)	Unit
		Foundational	Progressive	Aspirational			
Temperature difference	USEPA 170.1 or GB/T 13195	Δ+15	Δ+10	Δ+5	N/A	NA	°C
TSS	ISO 11923, USEPA 160.2, APHA 2540D or GB/T 11901	50	15	5	5	NA	mg/L
COD	ISO 6060, USEPA 410.4, APHA 5220D or GB/T 11914	150	80	40	40	NA	mg/L
Total-N	ISO 5663, ISO 29411, USEPA 351.2, APHA 4500P-J, APHA 4500N-C/ HJ 636 or GB 11891	20 mg/L	10 mg/L	5 mg/L	5	NA	mg/L
pH	With reference to ISO 10523, EPA 150.2, APHA 4500-H+	6-9	6-9	6-9	N/A	NA	/
Colour [m-1]	ISO 7887-A or B	7;5;3	5;3;2	2;1;1	N/A	NA	m ⁻¹
BOD ₅	ISO 5815-1 & -2, EN1899-1, USEPA 405.1, APHA 5210B or HJ 505	30	15	8	8	NA	mg/L
Ammonium-N	ISO 11732, ISO 7150, USEPA 350.1, APHA 4500 NH ₃ -N, HJ 535 or HJ 536	10	1	0.5	0.5	NA	mg/L
Total-P	ISO 11885, ISO 6878, USEPA 365.4, APHA 4500P-J or GB/T 11893	3	0.5	0.1	0.1	NA	mg/L
AOX	ISO 9562, EN ISO 9563, USEPA 1650, HJ.T 83-2001	3	0.5	0.1	0.1	NA	mg/L
Oil and grease	ISO 9377-2, USEPA 1664 or HJ 637	10	2	0.5	0.5	NA	mg/L
Phenol	ISO 14402, APHA 5530B, C, D or HJ 503	0.5	0.01	0.001	0.001	NA	mg/L
E.Coli	SM 9221B, SM9221F / G	126	126	126	126	NA	[MPN/100 ml]
Foam	/	Not visible	Not visible	Not visible	N/A	NA	/
Cyanide	ISO 6703-1 & 2, ISO 14403-1 & 2, USEPA 335.2, APHA 4500-CN or HJ 484	0.2	0.1	0.05	0.05	NA	mg/L
Sulfide	ISO 10530, SM 4500-S ₂ -D, E, G or I, GB/T 16489 or IS 3025 (part 29)	0.5	0.05	0.01	0.01	NA	mg/L



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Sulfite	ISO 10304-3, SM 4500-SO32-C or HJ 84-2016	2	0.5	N/A	0.2	NA	mg/L
DO	ISO 5814, EPA 360.1 or HJ 506	Sample and report only			N/A	NA	mg/L
Total Chlorine	ISO 7393-2, EPA 330.5 or HJ 586	Sample and report only			N/A	NA	mg/L
TDS	APHA 2540C, GB/T 5750.4	Sample and report only			5	NA	mg/L
Chloride	ISO 10304-1, ISO 15923-1, USEPA 300, HJ 84-2016, IS 3025 (part 32)	Sample and report only			N/A	NA	mg/L
Sulfate	ISO 10304-1, ISO 15923-1, USEPA 300, HJ 84-2016, IS 3025 (part 24)	Sample and report only			N/A	NA	mg/L
Wastewater Flowrate	/	-			N/A	NA	m ³ /day



2. Heavy metals

With reference to ISO 11885, ISO 18412, ISO 12846, ISO 17852, US EPA 200.7, US EPA 200.8, US EPA 6010c, US EPA 6020a, US EPA 218.6 and by Inductively Coupled Argon Plasma-Mass Spectrometry (ICP-MS) analysis.

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

Remark

- | | |
|--|--|
| ND = Not detected | NA = Not applicable |
| D = Detected | - = Did not perform |
| * = See remark | (f) = Parameter tested in field |
| @ = Maximum holding time exceeded,
Red flag in the ZDHC Gateway – Wastewater Module.
Probable error in results due to the holding time. | (T) = Handling temperature exceeded |
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3. Alkylphenols (APs) & AlkylphenolEthoxylates (APEOs)

NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS), OPEO/NPEO (n>2): ASTM D7742 ISO 18857-2

Alkylphenols (APs) & Alkylphenoethoxylates (APEOs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Octylphenol (OP)	140-66-9/ 1806-26-4/ 27193-28-8	0.005	ND (T)	ppm
Nonylphenol (NP)	104-40-5/ 11066-49-2/ 25154-52-3/ 84852-15-3	0.005	ND (T)	ppm
Octylphenoethoxylates (OPEOs)	9002-93-1/ 9036-19-5/ 68987-90-6	0.005	ND (T)	ppm
Nonylphenoethoxylates (NPEOs)	9016-45-9/ 26027-38-3/ 37205-87-1/ 68412-54-4/ 127087-87-0	0.005	ND (T)	ppm

4. Chlorobenzenes & Chlorotoluenes

USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS

Chlorobenzenes & Chlorotoluenes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
1,2-Dichlorobenzene	95-50-1	0.0002	ND (T)	ppm
Other isomers of mono-, di-, tri-, tetra-, penta-, and hexa- chlorobenzene and mono-, di-, tri-, tetra-, and penta- chlorotoluene	Various	0.0002	ND (T)	ppm

5. Chlorophenols

USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS, BS EN 12673-1999 the procedure of solvent extraction and derivatization are included

Chlorophenols	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
2-Chlorophenol	95-57-8	0.0005	ND (T)	ppm
3-Chlorophenol	108-43-0	0.0005	ND (T)	ppm
4-Chlorophenol	106-48-9	0.0005	ND (T)	ppm
2,3-Dichlorophenol	576-24-9	0.0005	ND (T)	ppm
2,4-Dichlorophenol	120-83-2	0.0005	ND (T)	ppm
2,5-Dichlorophenol	583-78-8	0.0005	ND (T)	ppm
2,6-Dichlorophenol	87-65-0	0.0005	ND (T)	ppm
3,4-Dichlorophenol	95-77-2	0.0005	ND (T)	ppm
3,5-Dichlorophenol	591-35-5	0.0005	ND (T)	ppm
2,4,6-Trichlorophenol	88-06-2	0.0005	ND (T)	ppm



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2,3,5-Trichlorophenol	933-78-8	0.0005	ND (T)	ppm
2,3,6-Trichlorophenol	933-75-5	0.0005	ND (T)	ppm
2,4,5-Trichlorophenol	95-95-4	0.0005	ND (T)	ppm
2,3,4-Trichlorophenol	15950-66-0	0.0005	ND (T)	ppm
3,4,5-Trichlorophenol	609-19-8	0.0005	ND (T)	ppm
2,3,4,5-Trichlorophenol	4901-51-3	0.0005	ND (T)	ppm
2,3,4,6-Tetrachlorophenol	58-90-2	0.0005	ND (T)	ppm
2,3,5,6-Tetrachlorophenol	935-95-5	0.0005	ND (T)	ppm
Pentachlorophenol (PCP)	87-86-5	0.0005	ND (T)	ppm

6. Restricted Aromatic Amines (Cleavable from Azo-colourants)

Reduction step with sodium dithionite, solvent extraction EPA 8270E and ISO 14362-1 GC/MS and LC/MS/MS

Azo Dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
4,4-Methylene-bis-(2-chloro-aniline)	101-14-4	0.0001	ND (T)	ppm
4,4-methylenedianiline	101-77-9	0.0001	ND (T)	ppm
4,4-Oxydianiline	101-80-4	0.0001	ND (T)	ppm
4-Chloroaniline	106-47-8	0.0001	ND (T)	ppm
3,3-Dimethoxybenzidine	119-90-4	0.0001	ND (T)	ppm
3,3-Dimethylbenzidine	119-93-7	0.0001	ND (T)	ppm
6-methoxy-m-toluidine	120-71-8	0.0001	ND (T)	ppm
2,4,5-Trimethylaniline	137-17-7	0.0001	ND (T)	ppm
4,4-Thiodianiline	139-65-1	0.0001	ND (T)	ppm
4-Aminoazobenzene	60-09-3	0.0001	ND (T)	ppm
4-methoxy-m-phenylenediamine	615-05-4	0.0001	ND (T)	ppm
4,4-methylenedi-o-toluidine	838-88-0	0.0001	ND (T)	ppm
2,6-Xylidine	87-62-7	0.0001	ND (T)	ppm
o-Anisidine	90-04-0	0.0001	ND (T)	ppm
2-Naphthylamine	91-59-8	0.0001	ND (T)	ppm
3,3'-Dichlorobenzidine	91-94-1	0.0001	ND (T)	ppm
4-Aminobiphenyl	92-67-1	0.0001	ND (T)	ppm
Benzidine	92-87-5	0.0001	ND (T)	ppm
o-Toluidine	95-53-4	0.0001	ND (T)	ppm
2,4-Xylidine	95-68-1	0.0001	ND (T)	ppm



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4-Chloro-o-toluidine	95-69-2	0.0001	ND (T)	ppm
4-Methyl-m-phenylenediamine	95-80-7	0.0001	ND (T)	ppm
o-Aminoazotoluene	97-56-3	0.0001	ND (T)	ppm
5-Nitro-o-toluidine	99-55-8	0.0001	ND (T)	ppm
2-Naphthylammoniumacetate	553-00-4	0.0001	ND (T)	ppm
2,4,5-trimethylaniline hydrochloride	21436-97-5	0.0001	ND (T)	ppm
4-chloro-o-toluidinium chloride	3165-93-3	0.0001	ND (T)	ppm
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisoole sulphate	39156-41-7	0.0001	ND (T)	ppm

7. Dyes – Carcinogenic or Equivalent Concern

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Carcinogenic dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
C.I. Direct Black 38	1937-37-7	0.5	ND (T)	ppm
C.I. Direct Blue 6	2602-46-2	0.5	ND (T)	ppm
C.I. Acid Red 26	3761-53-3	0.5	ND (T)	ppm
C.I. Basic Red 9	569-61-9	0.5	ND (T)	ppm
C.I. Direct Red 28	573-58-0	0.5	ND (T)	ppm
C.I. Basic Violet 14	632-99-5	0.5	ND (T)	ppm
C.I. Disperse Blue 1	2475-45-8	0.5	ND (T)	ppm
C.I. Disperse Blue 3	2475-46-9	0.5	ND (T)	ppm
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	0.5	ND (T)	ppm
C.I. Basic Green 4 (malachite green chloride)	569-64-2	0.5	ND (T)	ppm
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	0.5	ND (T)	ppm
C.I. Basic Green 4 (malachite green)	10309-95-2	0.5	ND (T)	ppm
Disperse Orange 11	82-28-0	0.5	ND (T)	ppm
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	0.5	ND (T)	ppm
C.I. Acid Violet 49	1694-09-3	0.5	ND (T)	ppm



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8. Dyes – Disperse (Sensitising)

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Disperse dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Disperse Yellow 1	119-15-3	0.05	ND (T)	ppm
Disperse Blue 102	12222-97-8	0.05	ND (T)	ppm
Disperse Blue 106	12223-01-7	0.05	ND (T)	ppm
Disperse Yellow 39	12236-29-2	0.05	ND (T)	ppm
Disperse Orange 37/59/76	13301-61-6	0.05	ND (T)	ppm
Disperse Brown 1	23355-64-8	0.05	ND (T)	ppm
Disperse Orange 1	2581-69-3	0.05	ND (T)	ppm
Disperse Yellow 3	2832-40-8	0.05	ND (T)	ppm
Disperse Red 11	2872-48-2	0.05	ND (T)	ppm
Disperse Red 1	2872-52-8	0.05	ND (T)	ppm
Disperse Red 17	3179-89-3	0.05	ND (T)	ppm
Disperse Blue 7	3179-90-6	0.05	ND (T)	ppm
Disperse Blue 26	3860-63-7	0.05	ND (T)	ppm
Disperse Yellow 49	54824-37-2	0.05	ND (T)	ppm
Disperse Blue 35	12222-75-2	0.05	ND (T)	ppm
Disperse Blue 124	61951-51-7	0.05	ND (T)	ppm
Disperse Yellow 9	6373-73-5	0.05	ND (T)	ppm
Disperse Orange 3	730-40-5	0.05	ND (T)	ppm
Disperse Blue 35	56524-77-7	0.05	ND (T)	ppm

9. Flame retardants

USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS)

Determined as total boron via ICP

Brominated flame retardants	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	0.025	ND (T)	ppm
Decabromodiphenyl ether (DecaBDE)	1163-19-5	0.025	ND (T)	ppm
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	0.025	ND (T)	ppm
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	0.025	ND (T)	ppm
Octabromodiphenyl ether (OctaBDE)	32536-52-0	0.025	ND (T)	ppm



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Bis(2,3-dibromopropyl) phosphate	5412-25-9	0.025	ND (T)	ppm
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	0.025	ND (T)	ppm
Polybromobiphenyls (PBBs)	59536-65-1	0.025	ND (T)	ppm
Tetrabromobisphenol A (TBBPA)	79-94-7	0.025	ND (T)	ppm
Hexabromocyclododecane (HBCDD)	3194-55-6	0.025	ND (T)	ppm
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	0.025	ND (T)	ppm
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	0.025	ND (T)	ppm
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	0.025	ND (T)	ppm
Decabromobiphenyl (DecaBB)	13654-09-6	0.025	ND (T)	ppm
Dibromobiphenyls (DiBB)	Various	0.025	ND (T)	ppm
Octabromobiphenyls (OctaBB)	Various	0.025	ND (T)	ppm
Dibromopropylether	21850-44-2	0.025	ND (T)	ppm
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	0.025	ND (T)	ppm
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	0.025	ND (T)	ppm
Monobromobiphenyls (MonoBB)	Various	0.025	ND (T)	ppm
Monobromodiphenylethers (MonoBDEs)	Various	0.025	ND (T)	ppm
Nonabromobiphenyls (NonaBB)	Various	0.025	ND (T)	ppm
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	0.025	ND (T)	ppm
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	0.025	ND (T)	ppm
Tribromodiphenylethers (TriBDEs)	Various	0.025	ND (T)	ppm
Boric acid	10043-35-3/ 11113-50-1	0.1 ^d	ND (T)	ppm
Diboron trioxide	1303-86-2	0.1 ^d	ND (T)	ppm
Disodium octaborate	12008-41-2	0.1 ^d	ND (T)	ppm
Disodium tetraborate anhydrous	1303-96-4/ 1330-43-4	0.1 ^d	ND (T)	ppm
Tetraboron disodium heptaoxide, hydrate	12267-73-1	0.1 ^d	ND (T)	ppm

d = Limit refers to elemental boron, not the salt

10. Glycols

USEPA 8270E Liquid extraction, LC-MS GC-MS

Glycols	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Bis(2-methoxyethyl)-ether	111-96-6	0.05	ND (T)	ppm
2-ethoxyethanol	110-80-5	0.05	ND (T)	ppm
2-ethoxyethyl acetate	111-15-9	0.05	ND (T)	ppm
Ethylene glycol dimethyl ether	110-71-4	0.05	ND (T)	ppm



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2-methoxyethanol	109-86-4	0.05	ND (T)	ppm
2-methoxyethylacetate	110-49-6	0.05	ND (T)	ppm
2-methoxypropylacetate	70657-70-4	0.05	ND (T)	ppm
Triethylene glycol dimethyl ether	112-49-2	0.05	ND (T)	ppm

11. Halogenated Solvents

USEPA 8260D Headspace GC-MS or Purge and trap GC-MS

Chlorinated solvents	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
1,2-Dichloroethane	107-06-2	0.001	ND (T)	ppm
Methylene chloride	75-09-2	0.001	ND (T)	ppm
Trichloroethene	79-01-6	0.001	ND (T)	ppm
Tetrachloroethene	127-18-4	0.001	ND (T)	ppm

12. Organotin compounds

ISO 17353 derivatisation with NaB (C₂H₅)₄ GC-MS

Organotin compounds	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Mono-, di- and tri-methyltin derivatives	Various	0.00001	ND (T)	ppm
Mono-, di- and tri-butyltin derivatives	Various	0.00001	ND (T)	ppm
Mono-, di- and tri-phenyltin derivatives	Various	0.00001	ND (T)	ppm
Mono-, di- and tri-octyltin derivatives	Various	0.00001	ND (T)	ppm
Tricyclohexyltin (TCyHT)	Various	0.00001	ND (T)	ppm
Dipropyltin compounds (DPT)	Various	0.00001	ND (T)	ppm
Tetrabutyltin compounds (TeBT)	Various	0.00001	ND (T)	ppm
Tripropyltin compounds (TPT)	Various	0.00001	ND (T)	ppm
Tetraoctyltin compounds (TeOT)	Various	0.00001	ND (T)	ppm
Tetraethyltin compounds (TeET)	Various	0.00001	ND (T)	ppm

13. Phthalates

USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS

Phthalates	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	0.01	ND (T)	ppm
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	0.01	ND (T)	ppm

Di-n-octyl phthalate (DNOP)	117-84-0	0.01	ND (T)	ppm
Di-iso-decyl phthalate (DIDP)	26761-40-0	0.01	ND (T)	ppm
Di-iso-nonyl phthalate (DINP)	28553-12-0	0.01	ND (T)	ppm
Di-n-hexyl phthalate (DnHP)	84-75-3	0.01	ND (T)	ppm
Dibutyl phthalate (DBP)	84-74-2	0.01	ND (T)	ppm
Butyl benzyl phthalate (BBP)	85-68-7	0.01	ND (T)	ppm
Diethyl phthalate (DEP)	84-66-2	0.01	ND (T)	ppm
Di-n-propyl phthalate (DPRP)	131-16-8	0.01	ND (T)	ppm
Di-iso-butyl phthalate (DIBP)	84-69-5	0.01	ND (T)	ppm
Di-cyclohexyl phthalate (DCHP)	84-61-7	0.01	ND (T)	ppm
Di-iso-octyl phthalate (DIOP)	27554-26-3	0.01	ND (T)	ppm
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUF)	68515-42-4/ 68515-50-4	0.01	ND (T)	ppm
1,2-benzenedicarboxylic acid, di-C6-11-branched alkyl esters, C7-rich (DIHP)	71888-89-6/ 84777-06-0	0.01	ND (T)	ppm
Di-n-pentylphthalates	131-18-0	0.01	ND (T)	ppm
Diisopentylphthalates	605-50-5	0.01	ND (T)	ppm
Dinonyl phthalate (DNP)	84-76-4	0.01	ND (T)	ppm

14. Perfluorinated chemicals (PFCs)

PFCs: EPA 537:2020, FTOH: BS EN 12673-1999, EPA 8270, PFCs: LC-MSMS, FTOH: GC-MS derivatisation with acetic anhydride followed by GC-MS

Perfluorinated chemicals (PFCs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Perfluorooctane sulfonic acid (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	Various	0.00001	ND (T)	ppm
Perfluorooctanoic acid (PFOA) related substances	Various	0.001	ND (T)	ppm

15. Polycyclic aromatic hydrocarbons (PAHs)

USEPA 8270E DIN 38407-39 solvent extraction GC-MS

Polycyclic aromatic hydrocarbons (PAHs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Benzo(a)pyrene (BaP)	50-32-8	0.001	ND (T)	ppm
Anthracene	120-12-7	0.001	ND (T)	ppm
Pyrene	129-00-0	0.001	ND (T)	ppm
Benzo(ghi)perylene	191-24-2	0.001	ND (T)	ppm
Benzo(e)pyrene	192-97-2	0.001	ND (T)	ppm



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Indeno (1,2,3-cd)pyrene	193-39-5	0.001	ND (T)	ppm
Benzo(j)fluoranthene	205-82-3	0.001	ND (T)	ppm
Benzo(b)fluoranthene	205-99-2	0.001	ND (T)	ppm
Fluoranthene	206-44-0	0.001	ND (T)	ppm
Benzo(k)fluoranthene	207-08-09	0.001	ND (T)	ppm
Acenaphthylene	208-96-8	0.001	ND (T)	ppm
Chrysene	218-01-9	0.001	ND (T)	ppm
Dibenz(a,h)anthracene	53-70-3	0.001	ND (T)	ppm
Benzo(a)anthracene	56-55-3	0.001	ND (T)	ppm
Acenaphthene	83-32-9	0.001	ND (T)	ppm
Phenanthrene	85-01-8	0.001	ND (T)	ppm
Fluorene	86-73-7	0.001	ND (T)	ppm
Naphthalene	91-20-3	0.001	ND (T)	ppm

16. Volatile organic compounds (VOCs)

ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D Add ISO 20595 Static headspace for determination of VOC in wastewater
 ISO 11423-1 Headspace or Purge and trap GC-MS EPA 8270 BS EN 12673-1999
 ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D
 HJ 1067 or EPA 8260D or ISO 11423-1

Volatile organic compounds (VOCs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Benzene	71-43-2	0.001	ND (T)	ppm
Xylene	1330-20-7	0.001	ND (T)	ppm
o-cresol	95-48-7	0.001	ND (T)	ppm
p-cresol	106-44-5	0.001	ND (T)	ppm
m-cresol	108-39-4	0.001	ND (T)	ppm
Toluene ^a	108-88-3	0.001	ND (T)	ppm

a = report only for mock leather

17. Anti-Microbials & Biocides

USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999
USEPA 8270E Solvent extraction followed by GC-MS or ISO 14154:2005 and determination by LCMS/LCMSMS

Carcinogenic dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
o-Phenylphenol (+salts)	90-43-7	0.1	ND (T)	ppm
Triclosan	3380-34-5	0.1	ND (T)	ppm
Permethrin	Various	0.5	ND (T)	ppm

18. Chlorinated Paraffins

EPA 3510 and analyzed by ISO18219-2:2021 Method for MCCP with GC-MS(NCI) or LC-MS/MS
EPA 3510 and analyzed by ISO18219-1:2021, ISO 12010:2019 Methods for SCCP with GC-MS(NCI) or LC-MS/MS

Chlorinated Paraffins	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Medium-chain chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	0.5	ND (T)	ppm
Short-chain chlorinated paraffins (C10-C13)	85535-84-8	0.025	ND (T)	ppm

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

EPA 8015, EPA 8270E

N,N-di-methylformamide (DMFa)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Dimethyl formamide; N,N-dimethylformamide (DMFa) ^a	68-12-2	1	ND (T)	ppm

a = report only for mock leather

20. Dyes – Navy Blue Colourant

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Dyes – Navy Blue Colourant	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	0.5	ND (T)	ppm
Component 2: C46H-30CrN10O20S2 3Na	Not allocated	0.5	ND (T)	ppm



21. Other /Miscellaneous Chemicals

By Liquid Chromatography Mass Spectrometry (LC-MS or LC-MS-MS) analysis.
Determine as total boron and total zinc via ICP

Other /Miscellaneous Chemicals	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
AEEA [2-(2-aminoethylamino)ethanol]	111-41-1	0.5	ND (T)	ppm
Bisphenol A	80-05-7	0.01	ND (T)	ppm
Thiourea	62-56-6	0.05	ND (T)	ppm
Quinoline	91-22-5	0.05	ND (T)	ppm
Borate, zinc salt	12767-90-7	0.1 ^b	ND (T)	ppm
Silica (used in sand blasting) ^c	14464-46-1	/	NA	ppm

b = Limit refers to boron and zinc individually, not the salt

c = Not required to test this parameter as this is related to sand blasting

22. UV Absorbers

USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B.
Dichloromethane extraction GC-MS or LC-MS(-MS)

UV Absorbers	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	0.1	ND (T)	ppm
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.1	ND (T)	ppm
2-benzotriazol-2-yl-4,6-di-tertbutylphenol (UV-320)	3846-71-7	0.1	ND (T)	ppm
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	0.1	ND (T)	ppm

23. Sludge Parameters – Step 1 – Metals (Sludge Disposal Pathway = NA)

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Sludge Parameters - Metals	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Arsenic	-	5	NA	ppm
Barium	-	200	NA	ppm
Cadmium	-	1	NA	ppm
Cobalt	-	400	NA	ppm
Copper	-	50	NA	ppm
Lead	-	5	NA	ppm



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Nickel	-	20	NA	ppm
Selenium	-	5	NA	ppm
Silver	-	50	NA	ppm
Total Chromium	-	50	NA	ppm
Zinc	-	400	NA	ppm
Chromium (VI)	-	20	NA	ppm
Mercury	-	1	NA	ppm
Antimony	-	5	NA	ppm

24. Sludge Parameters – Step 1 - Anions

ISO 6703-1 & 2, ISO 14403-1 & 2, USEPA 335.2, APAH 4500-CN or HJ 484

Sludge Parameters - Anions	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Cyanide	-	20	NA	ppm

25. Sludge Parameters – Step 1 - Conventional

With reference to ISO 10523, EPA 150.2, APHA 4500-H+
USEPA 160.3
EPA SW-846 or EPA 9095B
EPA 1681

Sludge Parameters - Conventional	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
pH	-	/	NA	-
% Solids	-	/	NA	%
Paint Filter Test	-	/	NA	-
Fecal Coliform	-	/	NA	MPN/g

26. Sludge Parameters – Step 1 – MRSL – Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs): including all isomers

NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS)), OPEO/NPEO (n>2): ASTM D7742 ISO 18857-2

Sludge Parameters – APs and APEOs	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Nonylphenol ethoxylates (NPEO)	Various	0.4	NA	ppm
Nonylphenol (NP), mixed isomers	Various	0.4	NA	ppm
Octylphenol ethoxylates (OPEO)	Various	0.4	NA	ppm
Octylphenol (OP), mixed isomers	Various	0.4	NA	ppm



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27. Sludge Parameters – Step 1 – MRSL – Polycyclic Aromatic Hydrocarbons (PAHs)

USEPA 8270E DIN 38407-39 Solvent extraction GC-MS

Sludge Parameters – PAHs	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Acenaphthene	83-32-9	0.2	NA	ppm
Acenaphthylene	208-96-8	0.2	NA	ppm
Anthracene	120-12-7	0.2	NA	ppm
Benzo[a]anthracene	56-55-3	0.2	NA	ppm
Benzo[a]pyrene (BaP)	50-32-8	0.2	NA	ppm
Benzo[b]fluoranthene	205-99-2	0.2	NA	ppm
Benzo[e]pyrene	192-97-2	0.2	NA	ppm
Benzo[ghi]perylene	181-24-2	0.2	NA	ppm
Benzo[j]fluoranthene	205-82-3	0.2	NA	ppm
Benzo[k]fluoranthene	207-08-9	0.2	NA	ppm
Chrysene	218-01-9	0.2	NA	ppm
Dibenz[a,h]anthracene	53-70-3	0.2	NA	ppm
Fluoranthene	206-44-0	0.2	NA	ppm
Fluorene	86-73-7	0.2	NA	ppm
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	NA	ppm
Naphthalene	91-20-3	0.2	NA	ppm
Phenanthrene	85-01-8	0.2	NA	ppm
Pyrene	129-00-0	0.2	NA	ppm

28. Sludge Parameters – Step 1 – MRSL – Chlorotoluenes

USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS

Sludge Parameters – Chlorotoluenes	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Isomers of mono-, di-, tri-, tetra- and penta chlorotoluene	Various	0.2	NA	ppm



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29. Sludge Parameters – Step 2 – Metals

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Sludge Parameters – Step 2 - Metals	CAS no.	Reporting limit (ppm)	Result Sample 4 (Leachate)	Unit
Antimony	-	/	NA	ppm
Arsenic	-	/	NA	ppm
Barium	-	/	NA	ppm
Cadmium	-	/	NA	ppm
Cobalt	-	/	NA	ppm
Copper	-	/	NA	ppm
Lead	-	/	NA	ppm
Nickel	-	/	NA	ppm
Selenium	-	/	NA	ppm
Silver	-	/	NA	ppm
Total Chromium	-	/	NA	ppm
Zinc	-	/	NA	ppm
Chromium (VI)	-	/	NA	ppm
Mercury	-	/	NA	ppm

Remark

ND	=	Not detected	NA	=	Not applicable
D	=	Detected	-	=	Did not perform
*	=	See remark	(f)	=	Parameter tested in field
@	=	Maximum holding time exceeded, Red flag in the ZDHC Gateway – Wastewater Module. Probable error in results due to the holding time.	(T)	=	Handling temperature exceeded
			(S)	=	Analysis was subcontracted for testing

Annex A: Sampling photos & Sampling locations

Sample 1 – Sampling Point
N/S 41° 52' 27,332" E/W 8° 65' 321"



Sample 1 – Labelled Sample Bottles



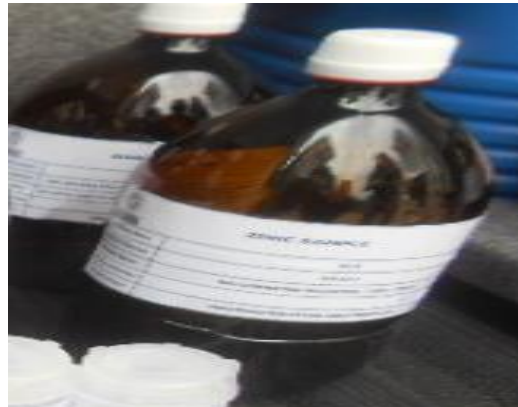
Sample 1 – Sample Packaging



Sample 1 – Sampling Point Surrounding Environment
N/S 41° 52' 27,332" E/W 8° 65' 321"



Sample 1 – Sample for Phthalate Test





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Annex A: Sampling photos & Sampling locations (continued)

Sample 2 – Sampling Point
N/S XX° XX' XX.XXX", E/W XX° XX' XX.XXX"

Sample 2 – Sampling Point Surrounding Environment
N/S XX° XX' XX.XXX", E/W XX° XX' XX.XXX"

N/A

N/A

Sample 2 – Labelled Sample Bottles

Sample 2 – pH Measurement

N/A

N/A

Sample 2 – Sample Packaging

N/A



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Annex A: Sampling photos & Sampling locations (continued)

Sample 3 – Sampling Point
N/S XX° XX' XX.XXX", E/W XX° XX' XX.XXX"

Sample 3 – Sampling Point Surrounding Environment
N/S XX° XX' XX.XXX", E/W XX° XX' XX.XXX"

N/A

N/A

Sample 3 – Labelled Sample Bottles

Sample 3 – Sample Packaging

N/A

N/A



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Annex B: On-site Field Data Record Sheet

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPD-AN-00613-DATA 04
	Issue Date:	
	Version No.: 17	
	Business Line: Analytical	

General Data

Laboratory Sample Number: 0740108818088

Client Name: ATB - Acabamentos Textéis de Barcelos

Field Contact Person: Sofia Vils Boas Phone No: 253 802 630

Project (Facility Name and Address): ATB - Rua Afonso Alves de Mariz n.º 1 Aparto 347 - MARIZ

Sampling Location / Description: BEFORE TREATMENT

Sample Identification: Zero discharge with sampling plan

Sample Type: Composite Sample (Water sample) (Process effluent) (Discharge)

Name of Sampler: Diana Garcia

Discharge mode: Zero discharge (no effluent) (Dry discharge) (Flow-by-Stream) (Off) (Zero discharge to sewage treatment plant)

Date of collection: 30/05/23

Factory Type: Printing / Washing / Finishing / Others (please specify):

Note: It would be selected more than one

Field Data for Wastewater

Arrival Time:	<u>09:36</u>	Departure Time:	<u>16:12</u>
Field Parameters:	<u>PH: 8.32</u>	Temp: <u>33.6 °C</u>	Color: <u>Dark Grey</u>
Control No. of field equipment:	<u>EQ0689</u>	<u>EQ0689</u>	
Factory with effluent treatment plant:	Yes		No
Sample matrix:	<input type="checkbox"/> Incoming water (if required)		
	<input checked="" type="checkbox"/> Wastewater before treatment		
	<input type="checkbox"/> Wastewater after treatment - water at discharge point		
Sampler container number:			
Recording time:	ID		
	Time	<u>09:46</u>	<u>10:46</u>
pH:	<u>8.32</u>	<u>8.36</u>	<u>8.37</u>
Temp (°C):	<u>32.8</u>	<u>32.9</u>	<u>33.2</u>
Color (visual estimation):	<u>Dark Grey</u>	<u>Dark Grey</u>	<u>Dark Grey</u>
Flow rate (volume/time):	<u>W.WE</u>	<u>W.WE</u>	<u>W.WE</u>
Volume collected, mL:	<u>2000</u>	<u>2000</u>	<u>2000</u>
Total volume collected:	<u>13200</u>	Remark: Total volume collected must be greater than total of sample size required	

Analyte Required and Preservation Method

Tests (ZDHC MRSL Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method		
Combined test or Individual test (Remark 4)	1. Phthalate	Y	Amber Glass, washed with nitric acid	Without adding acid to the sample at 2-8°C		
	2. Chlorobenzenes, Chlorotoluene & PAH	Y				
	3. SOCPs	Y				
	4. APS	Y				
5. APDCs	Y	100 mL				
6. Chlorophenols & Cresols	Y	100 mL				
7. Flame retardant	Y	500 mL				
8. Dye	Y	10 mL				
9. Dye2	Y	50 mL				
10. Phthalates	Y	1000 mL				
11. Nitrosamine	Y	10 mL				
12. Banned Azobenzes	Y	2000 mL				
13. Free primary aromatic amines	Y	500 mL				
14. Organic Compounds	Y	500 mL				
15. UV absorbers	Y	100				
16. BPA	Y	2				
17. Preservatives	Y	50				
18. VOC & Halogenated Solvents (Remark 6)	Y	10 mL				Fill to fill container without air gap; add to pH 2 with HCl and store samples at 2-8°C
19. PFCs (Remark 6)	Y	2 mL			PC washed with peroxide grade Acetone	Without adding acid to the sample at 2-8°C



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Annex B: On-site Field Data Record Sheet (continued)

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 17
		Business Line: Analytical

Tests (Conventional Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method
20. Total suspended solids (TSS) 21. Total dissolved solids (TDS)		2000 mL total or 2000 mL each	Amber Glass, washed with nitric acid.	Without adding acid Store sample at 2-8°C
22. 5-day Biochemical Oxygen Demand (BOD5)		900 mL		
23. Colour		100 mL		
24. Heavy Metals except Cr(VI) & Total-P (Remark 6)	✓	9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO ₃ and store at 2-8°C
25. Cyanide		500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.50 mL of 10% Na ₂ S ₂ O ₅ , and store sample at 2-8°C
26. Cr(VI)	✓	95 mL	Amber Glass, washed with nitric acid	Filter by 0.45µm filter in field, fill to full container without air gap, adjust pH to 2 with 6M HCl, add potassium tetrathionate buffer. Store sample at 2-8°C
27. Chemical oxygen demand (COD)		150 mL		Acidify to pH 2 with H ₂ SO ₄ . Store sample at 2-8°C
28. Phenols		500 mL		Fill to full container without air gap, acidify to pH 2 with H ₂ SO ₄ and store sample at 2-8°C
29. Oil and Grease & Total Hydrocarbon		1000 mL		Fill to full container without air gap, acidify to pH 2 with H ₂ SO ₄ and store sample at 2-8°C
30. *Formaldehyde		25 mL		Fill to full container without air gap, acidify to pH 2 with H ₂ SO ₄ and store sample at 2-8°C
31. Sulfide (Remark 5)		50 mL	PE, washed with pesticide grade acetone	Fill to full container without air gap, add 2 drops of 2M zinc acetate, adjust pH to 9 with 6M NaOH. Store sample at 2-8°C
32. E.coli (Remark 6)		125 mL	PE, clean, sterile, non-reactive	Add 0.1 mL of 10% Na ₂ SO ₃ soap in dark. Store sample at 2-8°C
33. Persistent foam		N.A.	Foam higher than 45 cm (Visual estimation)	Yes / No
34. Sulfite		100 mL	Amber Glass, washed with pesticide grade acetone	Add 1 mL of 1.0% EDTA. Store sample at 2-8°C
35. Total-N		100 mL	Amber Glass, washed with nitric acid	Acidify to pH 2 with H ₂ SO ₄ . Store sample at 2-8°C
36. Ammonium-N		90 mL		Acidify to pH 2 with HNO ₃ and store at 2-8°C
37. Adsorbable organically bound halogens (AOX)		100 mL		Without adding acid Store sample at 2-8°C
38. Acute aquatic toxicity: Luminescent Bacteria; Fish Egg; Daphnia; Algae		1000 mL		
39. Substrate		100 mL		
40. Chloride		100 mL		
41. Conductivity		100 mL		
42. Dissolved oxygen (DO)		N.A.	measure in field	
43. Total Chlorine		N.A.	measure in field	
44. Others:				

Observer's Remark:

*Remarks:

- Individual sampling can be performed upon request
- The minimum sampling time for 2019 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request
- Scope of ZDHC guideline: Parameter 1-9, 11, 14-29, 31-37, 39-43
Scope of synthetic leather industry: Parameter 1-9, 12, 14-24, 26-29, 31-33, 35, 39, 39, 40
Scope of MVCF: Parameter 5, 10, 20, 22-24, 26-29, 31, 35-38
- For primary aromatic amines, pesticides, nitroaromatics and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-030013-ST P01, factories with those CPSD test capability inside TCD matrix can perform the combined test.
- Refer to CPSD-AN-000570-4/THD for additional pre-treatment of sulfide if on dissolved sulfide is required to be tested.
- Refer to CPSD-AN-00013-MTHD for preparation of field blank for specific parameters.

Received by: Diana Ferris
Full name:

Date: 30/05/23

Comment from factory:

Acknowledgement by factory


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

Signature of Factory Representative:

x EJP
Full Name:

Date: 30/05/23

Annex B: On-site Field Data Record Sheet (continued)

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)		CPSD-AN-00613-DATA 04	
			Issue Date:	
			Version No.: 17	
				Business Line: Analytical

Field Data for Sludge		Arrival Time:		Departure Time:					
Field Parameters	pH:	Temp:	°C	Flow rate (volume/time) / sludge flux (weight/time):					
Control No. of field equipment		1	2	3	4	5	6	7	8
Recording time	ID								
	Time								
pH:									
Temp (°C):									
Flow rate (volume/time) / sludge flux (weight/time)									
Volume collected, mL									
Total volume collected		Remark: Total volume collected must be greater than total of sample size required							

Analysis Required and Preservation Method		Yes		No			
Factory with effluent treatment plant							
Sample matrix		Sludge in clarifier (sedimentation tank)					
Sampler container number							
Recording time							
Tests (MRSL Parameter)	Test required (v)	Total of sample size	Type of container	Preservation method			
Combined test or Individual test (Remark 3)	1. Phthalate	10g total or 10g each	Amber Glass, washed with nitric acid	Add 0.2 mL of 10% Na ₂ S ₂ O ₃ (0.008% WV). Store sample at 4°C			
	2. Chlorobenzenes, Chlorotoluene & PAHs						
	3. SCCPs						
	4. APS						
5. APEOs		20 g					
6. Flame retardant		10 g					
7. Dyes		10 g					
8. Glycols		100 g					
9. *Pesticides		20g					
10. Banned Azodyes		20 g					
11. *Free primary aromatic amines		10 g					
12. Chlorophenols & Cresols		20 g					Acidify to -pH 2 with H ₂ SO ₄ . Add 0.02 mL of 10% Na ₂ S ₂ O ₃ (0.008% WV). Store sample at 4°C
13. Organotin Compounds		10 g					Fill to full container without any air gap and acid add and store at 4°C
14. VOC & Halogenated Solvents (Remark 5)		10 g					Fill to full bottle without any air gap. Acidify to -pH 2 with HCl. Store sample at 4°C
15. PFCs (Remark 5)		10 g				PE, wash with pesticide grade acetone	Add 0.02 mL of 10% Na ₂ S ₂ O ₃ (0.008% WV). Store sample at 4°C


Tests (Conventional Parameters)	Test required (v)	Total of sample size	Type of container	Preservation method
16. Heavy Metals except Cr(VI) (Remark 5)		0.2 g	PE, wash with nitric acid	Acidify to -pH 2 with HNO ₃ . Store sample at 4°C
17. Cr(VI)		2.5 g	Amber Glass, wash with nitric acid	Fill to full container without any air gap and acid add and store at 4°C
18. Adsorbable organically bound halogens (AOX)		1 g		
19. Extractable organochlorides (EOX)		20 g		
20. Total organic carbon (TOC)		20 g		
21. Cyanide		50 g	Amber Glass, wash with pesticide grade acetone	Adjust pH to 12-13 with 50% NaOH and store at 4°C
22. Faecal Coliform		20 g	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na ₂ S ₂ O ₃ , keep in dark. Store sample at 2-8°C
23. % Solids		20 g	Amber Glass, wash with nitric acid	Acidify to -pH 2 with HNO ₃



Report Number

(7223)153-0020

Annex B: On-site Field Data Record Sheet (continued)

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)			CPSD-AN-00613-DATA 04	
				Issue Date:	
				Version No.: 17	
				Business Line: Analytical	
24. Paint Filler Test		20 g	Filter: Glass, Wash with H ₂ O/250 ml	Store sample at 4°C	
25. Others					
Observation/ Remark:					

Annex C: Contract limit with centralized ETP (if proceed)

Parameters	Expression of Results	Maximum Value in Municipal Collectors Barcelos (maximum admissible value)
PH	Sorensen scale	5,5 – 9,5
TEMPERATURE	°C	40
BOD5 (Biological Oxygen Demand)	mg/L O ₂	500
(COD) (chemical oxygen demand)	mg/L O ₂	1000
total suspended solids	mg/L	1000
Oil and fat	mg/L	50
Sulphides	mg/L S	5
Total arsenic	mg/L As	1,0
Total lead	mg/L Pb	1,0
Total cadmium	mg/L Cd	0,2
Hexavalent chromium	mg/L Cr (VI)	0,1
Total chromium	mg/l Cr	2,0
Total mercury	mg/L Hg	0,05
Total copper	mg/L Cu	1,0
Zinc	mg/L Ni	2,0
heavy metals (Total)	mg/L Zn	5,0
Total cyanide	mg/L	10
Detergents	mg/L CN	0,5
Total hydrocarbons	mg/L	50