



LAB REPORT

Report number	(6825)103-0089		
Date of sampling (dd/mm/yyyy)	12/04/2025		
Date of report (dd/mm/yyyy)	22/04/2025		
Factory company name	Pioneer Denim Limited		
Factory address	Horitola, Shahpur Bazar, Madhabpur, Habiganj, Sylhet, 3333, Bangladesh.		
Discharge type	Direct Discharge		
Discharge destination name & address	Local Canal		
Average total industrial wastewater generated	≥15 m ³ per day	Manufacturing process type	Textile
Onsite ETP / Pretreatment	Yes	Homogenization Tank & Average Holding Time	Yes (raw), >12h
ZDHC sampler accreditation certification number	C74D106817431		
Sample description & Sample collection method			
Untreated wastewater (raw)	I001, blue liquid, composite sample at 12:20, 13:20, 14:20, 15:20, 16:20, 17:20, 18:20		
Discharged wastewater (effluent)	I002, lt. brown liquid, composite sample at 12:30, 13:30, 14:30, 15:30, 16:30, 17:30, 18:30		
Sludge	I003, black semi-solid, composite sample at 15:00		
Local legal data			
Local legal standard name & number [a]	Environmental Conservation Rules' 2023 (Bangladesh) & S. R. O Number.: 53/Law/2023		
Parameters (ZDHC WWG V2.2, Table 2 & 3) meeting local regulation [a]	Meet		
Discharge permit provided	Yes		
ZDHC overall results			
Wastewater MRSL	Not detected		
Wastewater metals	Meet aspirational limit		
Wastewater conventional and anions	Meet foundational limit		
Sludge disposal pathway	C	Sludge	Sample and report only

Internal Description	
Sample reference number	(6825)103-0089
Date & time of the beginning of sampling	12/04/2025, 12:00
Date & time of the end of sampling	12/04/2025, 19:00
Sample received date	12/04/2025
Testing period	From 12/04/2025 to 22/04/2025
Sample holding time exceeded	No
Sample temperature when received from lab	6 °C
Comments	No comment
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**Summary of test results**

Wastewater / MRSL - Test Items	Raw I001
AP and APEOs	ND
Antimicrobials and Biocides	ND
Chlorinated Paraffins	ND
Chlorobenzenes and Chlorotoluenes	ND
Chlorophenols	ND
DMFa	ND
Dyes-Carcinogenic or Equivalent Concern	ND
Dyes-Disperse (Allergenic)	ND
Dyes-Navy Blue Colourant	NA
Flame Retardants	ND
Glycols / Glycol Ethers	ND
Halogenated Solvents	ND
Organotin Compounds	ND
Other / Miscellaneous Chemicals	ND
PFCs	ND
Phthalates	ND
PAHs	ND
Restricted Aromatic Amines	ND
UV Absorbers	ND
VOC	ND

Summary of test results

Wastewater / Metals - Test Items	Effluent 1002
Antimony	Aspirational
Chromium (VI)	Aspirational
Barium	Report only
Selenium	Report only
Tin	Report only
Arsenic	Aspirational
Total Chromium	Aspirational
Cobalt	Aspirational
Cadmium	Aspirational
Copper	Aspirational
Lead	Aspirational
Nickel	Aspirational
Silver	Aspirational
Zinc	Aspirational
Mercury	Aspirational
Wastewater / Conventional & Anions - Test Items	Effluent 1002
pH [f]	Aspirational
Temperature difference [f]	Aspirational
E.coli	Aspirational
Colour	Progressive
Persistent foam [f]	Aspirational
Wastewater flowrate [f]	Report only
Ammonium-Nitrogen	Progressive
AOX	Progressive
BOD5	Foundational
COD	Progressive
DO [f]	Aspirational
Oil & Grease	Foundational
Total Phenols	Aspirational
Total Chlorine [f]	Aspirational
TDS	Report only
Total Nitrogen	Aspirational
Total Phosphorus	Foundational
TSS	Progressive
Chloride	Report only
Cyanide, total	Aspirational
Sulphate	Report only
Sulphide	Foundational
Sulphite	Foundational



Summary of test results **Sludge Disposal Pathway = C**

Sludge / Sludge Parameters - Test Items	Sludge I003
AP and APEOs	Report only
PAHs	Report only
Chlorotoluenes	Report only
Antimony	NA
Arsenic	NA
Barium	NA
Cadmium	NA
Cobalt	NA
Copper	NA
Lead	NA
Nickel	NA
Selenium	NA
Silver	NA
Zinc	NA
Total Chromium	NA
Chromium (VI)	NA
Mercury	NA
pH	NA
Fecal Coliform	NA
% Solids	Report only
Paint Filter Test	NA
Cyanide	NA

Sludge flux and/or sludge flow data: NA

Remark (indicated in each parameter)		
ND	=	Not detected (below lab reporting limit)
D	=	Detected (above lab reporting limit)
Meet	=	(Sludge) Meet sludge disposal pathway limit
Not meet	=	(ZDHC) Not meet foundational limit, (Sludge) Not meet sludge disposal pathway limit
Foundational	=	Meet foundational limit
Progressive	=	Meet progressive limit
Aspirational	=	Meet aspirational limit
Report only	=	Parameter is for report only, please refer to the data
[a]	=	The local legal standard name and legal standard number is referenced to discharge permit (or contractual agree by CETP) that provided by company
(f)	=	Parameter tested in field
(T)	=	Handling temperature exceeded
@	=	Maximum holding time exceeded
*	=	See comment
(S)	=	Analysis was subcontracted for testing



1) Test result - Wastewater / MRSL
1A) AP and APEOs: including all isomers

Internal method with reference to NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS))
 OPEO/NPEO (n>2): ISO 18857-2

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
NPEO	Multiple 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	5	5	ND			
NP, mixed isomers	Multiple 104-40-5, 11066-49-2, 25154-52-3, 84852-15-3	5	5	ND			
OPEO	Multiple 9002-93-1, 9036-19-5, 68987-90-6	5	5	ND			
OP, mixed isomers	Multiple 140-66-9, 1806-26-4, 27193-28-8	5	5	ND			

1B) Anti-Microbials & Biocides

Internal method with reference to USEPA 8270E, Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS (o-Phenylphenol), Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999 (Triclosan) and USEPA 8270E Solvent extraction followed by GC-MS or ISO 14154:2005 (Permethrin)

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
o-Phenylphenol (+salts)	90-43-7	100	100	ND			
Triclosan	3380-34-5	100	100	ND			
Permethrin	Multiple 52645-53-1	500	500	ND			

1C) Chlorinated Paraffins

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

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
MCCPs (C14-C17)	85535-85-9	500	500	ND			
SCCPs (C10'-C13)	85535-84-8	25	25	ND			

1D) Chlorobenzenes and Chlorotoluenes

Internal method with reference to USEPA 8260D, 8270E, Purge and Trap, Head Space
 Dichloromethane extraction followed by GC-MS

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
1,2-dichlorobenzene	95-50-1	0.2	0.2	ND			
Other isomers of mono-, di-, tri-, tetra-, penta-, and hexa-chlorobenzene and mono-, di-, tri-, tetra-, and penta- chlorotoluene	Multiple 108-90-7, 541-73-1, 106-46-7, 87-61-6, 120-82-1, 108-70-3, 634-66-2, 634-90-2, 95-94-3, 608-93-5, 118-74-1, 95-49-8, 108-41-8, 106-43-4, 32768-54-0, 95-73-8, 19398-61-9, 118-69-4, 95-75-0, 25186-47-4, 7359-72-0, 2077-46-5, 6639-30-1, 23749-65-7, 21472-86-6, 1006-32-2, 875-40-1, 1006-31-1, 877-11-2	0.2	0.2	ND			



1E) Chlorophenols

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

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
2-chlorophenol	95-57-8	0.5	0.5	ND			
2,3-dichlorophenol	576-24-9	0.5	0.5	ND			
2,3,4-trichlorophenol	15950-66-0	0.5	0.5	ND			
2,3,5-trichlorophenol	933-78-8	0.5	0.5	ND			
2,3,6-trichlorophenol	933-75-5	0.5	0.5	ND			
2,4-dichlorophenol	120-83-2	0.5	0.5	ND			
2,4,5-trichlorophenol	95-95-4	0.5	0.5	ND			
2,4,6-trichlorophenol	88-06-2	0.5	0.5	ND			
2,5-dichlorophenol	583-78-8	0.5	0.5	ND			
2,6-dichlorophenol	87-65-0	0.5	0.5	ND			
3-chlorophenol	108-43-0	0.5	0.5	ND			
3,4-dichlorophenol	95-77-2	0.5	0.5	ND			
3,4,5-trichlorophenol	609-19-8	0.5	0.5	ND			
3,5-dichlorophenol	591-35-5	0.5	0.5	ND			
4-chlorophenol	106-48-9	0.5	0.5	ND			
Pentachlorophenol (PCP)	87-86-5	0.5	0.5	ND			
2,3,5,6-tetrachlorophenol	935-95-5	0.5	0.5	ND			
2,3,4,6-tetrachlorophenol	58-90-2	0.5	0.5	ND			
2,3,4,5-tetrachlorophenol	4901-51-3	0.5	0.5	ND			

1F) N,N-di-methylformamide (DMFa)

Internal method with reference to EPA 8015, EPA 8270E

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Dimethyl formamide; N,N-dimethylformamide (DMFa)	68-12-2	1000	1000	ND			

1G) Dyes - Carcinogenic or Equivalent Concern

Internal method with reference to DIN 54231

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	500	500	ND			
C.I. Acid Red 26	3761-53-3	500	500	ND			
C.I. Acid Violet 49	1694-09-3	500	500	ND			
C.I. Basic Blue 26 with Michler's Ketone >0.1%	2580-56-5	500	500	ND			
C.I. Basic Green 4 (Malachite Green Chloride)	569-64-2	500	500	ND			
C.I. Basic Green 4 (Malachite Green Oxalate)	2437-29-8	500	500	ND			
C.I. Basic Green 4 (Malachite Green)	10309-95-2	500	500	ND			
C.I. Basic Red 9	569-61-9	500	500	ND			
C.I. Basic Violet 14	632-99-5	500	500	ND			
C.I. Direct Black 38	1937-37-7	500	500	ND			
C.I. Direct Blue 6	2602-46-2	500	500	ND			
C.I. Direct Red 28	573-58-0	500	500	ND			
C.I. Disperse Blue 1	2475-45-8	500	500	ND			
C.I. Disperse Blue 3	2475-46-9	500	500	ND			
C.I. Disperse Orange 11	82-28-0	500	500	ND			

1H) Dyes - Disperse (Allergenic)

Internal method with reference to DIN 54231

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Disperse Blue 102	12222-97-8	50	50	ND			
Disperse Blue 106	12223-01-7	50	50	ND			
Disperse Blue 124	61951-51-7	50	50	ND			
Disperse Blue 26	3860-63-7	50	50	ND			
Disperse Blue 35	12222-75-2	50	50	ND			
Disperse Blue 35	56524-77-7	50	50	ND			
Disperse Blue 7	3179-90-6	50	50	ND			
Disperse Brown 1	23355-64-8	50	50	ND			
Disperse Orange 1	2581-69-3	50	50	ND			
Disperse Orange 3	730-40-5	50	50	ND			
Disperse Orange 37/59/76	13301-61-6	50	50	ND			
Disperse Red 1	2872-52-8	50	50	ND			
Disperse Red 11	2872-48-2	50	50	ND			
Disperse Red 17	3179-89-3	50	50	ND			
Disperse Yellow 1	119-15-3	50	50	ND			
Disperse Yellow 3	2832-40-8	50	50	ND			
Disperse Yellow 39	12236-29-2	50	50	ND			
Disperse Yellow 49	54824-37-2	50	50	ND			
Disperse Yellow 9	6373-73-5	50	50	ND			

1I) Dyes - Navy Blue Colourant

Internal method with reference to BV In house method

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Component 1: C ₃₉ H ₂₃ Cl-CrN ₇ O ₁₂ S ₂ Na	118685-33-9	NA	NA	NA			
Component 2: C ₄₆ H ₃₀ CrN ₁₀ O ₂₀ S ₂ 3Na	Not allocated						

1J) Flame Retardants

Internal method with reference to ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS & Determined as total boron via ICP, ISO 17294

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Boric acid	10043-35-3, 11113-50-1	500	500	ND			
Diboron trioxide	1303-86-2	500	500	ND			
Disodium octaborate	12008-41-2	500	500	ND			
Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4	500	500	ND			
Tetraboron disodium heptaoxide, hydrate	12267-73-1	500	500	ND			
Hexabromocyclodecane (HBCDD)	3194-55-6	25	25	ND			
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	25	25	ND			
Polybromobiphenyls (PBB)	59536-65-1	25	25	ND			
Monobromobiphenyls (MonoBB)	Multiple	25	25	ND			
Monobromodiphenylethers (MonoBDEs)	Multiple	25	25	ND			
Dibromobiphenyls (DiBB)	Multiple	25	25	ND			
Dibromopropylether	21850-44-2	25	25	ND			
Tribromophenylethers (TriBDEs)	Multiple	25	25	ND			
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	25	ND			
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	25	ND			
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	25	ND			
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	25	ND			
Octabromobiphenyls (OctaBB)	Multiple	25	25	ND			
Octabromodiphenyl ether (OctaBDE)	32536-52-0	25	25	ND			
Nonabromobiphenyls (NonaBB)	Multiple	25	25	ND			
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	25	ND			
Decabromobiphenyl (DecaBB)	13654-09-6	25	25	ND			
Decabromophenyl ether (DecaBDE)	1163-19-5	25	25	ND			
Tetrabromobisphenol A (TBBPA)	79-94-7	25	25	ND			
Bis(2,3-dibromopropyl) phosphate (BDBPP)	5412-25-9	25	25	ND			
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	25	ND			
Tris(1-aziridinyl) phosphone oxide (TEPA)	545-55-1	25	25	ND			
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	25	25	ND			
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	25	25	ND			
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	25	25	ND			

Footnote for boron flame retardant: Limit refers to the total elemental boron via ICP. If the total elemental boron content is higher than 500 µg/L, then all five boron flame retardant are non-conformant.

1K) Glycols / Glycol Ethers

Internal method with reference to USEPA 8270E

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
2-ethoxyethanol	110-80-5	50	50	ND			
2-ethoxyethyl acetate	111-15-9	50	50	ND			
2-methoxyethanol	109-86-4	50	50	ND			
2-methoxyethylacetate	110-49-6	50	50	ND			
2-methoxypropylacetate	70657-70-4	50	50	ND			
Bis(2-methoxyethyl)-ether	111-96-6	50	50	ND			
Ethylene glycol dimethyl ether	110-71-4	50	50	ND			
Triethylene glycol dimethyl ether	112-49-2	50	50	ND			



1L) Halogenated Solvents

Internal method with reference to USEPA 8260D

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
1,2-dichloroethane	107-06-2	1	1	ND			
Methylene chloride	75-09-2	1	1	ND			
Tetrachloroethylene	127-18-4	1	1	ND			
Trichloroethylene	79-01-6	1	1	ND			

1M) Organotin Compounds

Internal method with reference to ISO 17353

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Dipropyltin compounds (DPT)	Multiple 867-36-7	0.01	0.01	ND			
Mono, di-, and tri-butyltin derivatives	Multiple 1118-46-3, 1461-22-9	0.01	0.01	ND			
Mono, di-, and tri-methyltin derivatives	Multiple 993-16-8, 753-73-1, 1066-45-1	0.01	0.01	ND			
Mono, di-, and tri-octyltin derivatives	Multiple 3091-25-6, 3542-36-7, 2587-76-0	0.01	0.01	ND			
Mono, di-, and tri-phenyltin derivatives	Multiple 1124-19-2, 1135-99-5, 639-58-7	0.01	0.01	ND			
Tetraethyltin compounds (TeET)	Multiple 1461-25-2	0.01	0.01	ND			
Tetraethyltin compounds (TeET)	Multiple 597-64-8	0.01	0.01	ND			
Tetraoctyltin compounds (TeOT)	Multiple 3590-84-9	0.01	0.01	ND			
Tricyclohexyltin (TCyHT)	Multiple 3091-32-5	0.01	0.01	ND			
Tripropyltin compounds (TPT)	Multiple 2279-76-7	0.01	0.01	ND			

1N) Other / Miscellaneous Chemicals

AEEA: Liquid extraction, LC-MS/LCMSMS; Bisphenol A: Liquid extraction, LC-MS; Thiourea: Internal method with reference to ISO 13365-1:2020, EN 17134:2019, Liquid extraction, LC-MS; Quinoline: Internal method with reference to DIN 54231, Liquid extraction, LC-MS; Borate, zinc salt: Determined as total boron and total zinc via ICP with reference to ISO 17294-2

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
AEEA [2-(2-aminoethylamino)ethanol]	111-41-1	500	500	ND			
Bisphenol A	80-05-7	10	10	ND			
Borate (Borate, zinc salt)	12767-90-7	100	100	ND			
Zinc salt (Borate, zinc salt)		100	100	102			
Quinoline	91-22-5	50	50	ND			
Silica (particles of respirable size)	14464-46-1	NA	NA	NA			
Thiourea	62-56-6	50	50	ND			

Footnote for borate, zinc salt: Limit refers to boron and zinc individually, not the salt. Total boron and total zinc values should be less than 100 µg/L to be conformant. When total boron is >100 µg/L and total zinc is <100 µg/L (or vice versa), the sample is still conformant.



1O) Perfluorinated and Polyfluorinated Chemicals (PFCs)

Internal method with reference to PFCs: EPA 537:2020, FTOH: EPA 8270

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Perfluorooctane sulfonate (PFOS) and related substances	Multiple 1763-23-1	0.01	0.01	ND			
Perfluorooctanoic acid (PFOA) and related substances	Multiple 335-67-1	1	1	ND			

1P) Phthalates - including all other esters of ortho-phthalic acid

Internal method with reference to US EPA 8270D, ISO 18856 Dichloromethane extraction GC/MS

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
1,2-benzenedicarboxylic acid, di-C6-8 branched and linear alkyl esters, C7-rich (DIHP)	71888-89-6/ 84777-06-0	10	10	ND			
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)	68515-42-4/ 68515-50-4	10	10	ND			
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	10	10	ND			
Butyl benzyl phthalate (BBP)	85-68-7	10	10	ND			
Di-cyclohexyl phthalate (DCHP)	84-61-7	10	10	ND			
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	10	ND			
Di-iso-octyl phthalate (DIOP)	27554-26-3	10	10	ND			
Di-iso-butyl phthalate (DIBP)	84-69-5	10	10	ND			
Di-iso-nonyl phthalate (DINP)	28553-12-0	10	10	ND			
Di-n-hexyl phthalate (DnHP)	84-75-3	10	10	ND			
Di-n-octyl phthalate (DNOP)	117-84-0	10	10	ND			
Di-n-pentylphthalates	131-18-0	10	10	ND			
Di-n-propyl phthalate (DPRP)	131-16-8	10	10	ND			
Di(ethylhexyl) phthalate (DEHP)	117-81-7	10	10	ND			
Dibutyl phthalate (DBP)	84-74-2	10	10	ND			
Diethyl phthalate (DEP)	84-66-2	10	10	ND			
Diisopentylphthalates	605-50-5	10	10	ND			
Dinonyl phthalate (DNP)	84-76-4	10	10	ND			



1Q) Polycyclic Aromatic Hydrocarbons (PAHs)

Internal method with reference to US EPA 8270 DIN 38407-39 Solvent extraction GC/MS

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw I001			
Acenaphthene	83-32-9	1	1	ND			
Acenaphthylene	208-96-8	1	1	ND			
Anthracene	120-12-7	1	1	ND			
Benzo[a]anthracene	56-55-3	1	1	ND			
Benzo[a]pyrene	50-32-8	1	1	ND			
Benzo[b]fluoranthene	205-99-2	1	1	ND			
Benzo[e]pyrene	192-97-2	1	1	ND			
Benzo[ghi]perylene	191-24-2	1	1	ND			
Benzo[j]fluoranthene	205-82-3	1	1	ND			
Benzo[k]fluoranthene	207-08-9	1	1	ND			
Chrysene	218-01-9	1	1	ND			
Dibenz[a,h]anthracene	53-70-3	1	1	ND			
Fluoranthene	206-44-0	1	1	ND			
Fluorene	86-73-7	1	1	ND			
Indeno[1,2,3-cd]pyrene	193-39-5	1	1	ND			
Naphthalene	91-20-3	1	1	ND			
Phenanthrene	85-01-8	1	1	ND			
Pyrene	129-00-0	1	1	ND			

1R) Restricted Aromatic Amines (Cleavable from Azo-colourants)

Internal method with reference to EN 14362-1, EN ISO 14362-3

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
2-naphthylamine	91-59-8	0.1	0.1	ND			
2-naphthylammoniumacetate	553-00-4	0.1	0.1	ND			
2,4-xylidine	95-68-1	0.1	0.1	ND			
2,4,5-trimethylaniline	137-17-7	0.1	0.1	ND			
2,4,5-trimethylaniline hydrochloride	21436-97-5	0.1	0.1	ND			
2,6-xylidine	87-62-7	0.1	0.1	ND			
3',3-dichlorobenzidine	91-94-1	0.1	0.1	ND			
3,3-dimethoxybenzidine	119-90-4	0.1	0.1	ND			
3,3-dimethylbenzidine	119-93-7	0.1	0.1	ND			
4-aminoazobenzene	60-09-3	0.1	0.1	ND			
4-aminodiphenyl	92-67-1	0.1	0.1	ND			
4-chloro-o-toluidine	95-69-2	0.1	0.1	ND			
4-chloro-o-toluidinium chloride	3165-93-3	0.1	0.1	ND			
4-chloroaniline	106-47-8	0.1	0.1	ND			
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	0.1	0.1	ND			
4-methoxy-m-phenylenediamine	615-05-4	0.1	0.1	ND			
4-methyl-m-phenylenediamine	95-80-7	0.1	0.1	ND			
4,4-methylene-bis-(2-chloro-aniline)	101-14-4	0.1	0.1	ND			
4,4-methylenedi-o-toluidine	838-88-0	0.1	0.1	ND			
4,4-methylenedianiline	101-77-9	0.1	0.1	ND			
4,4-oxydianiline	101-80-4	0.1	0.1	ND			
4,4-thiodianiline	139-65-1	0.1	0.1	ND			
5-nitro-o-toluidine	99-55-8	0.1	0.1	ND			
6-methoxy-m-toluidine	120-71-8	0.1	0.1	ND			
Benzidine	92-87-5	0.1	0.1	ND			
o-aminoazotoluene	97-56-3	0.1	0.1	ND			
o-anisidine	90-04-0	0.1	0.1	ND			
o-toluidine	95-53-4	0.1	0.1	ND			

1S) UV Absorbers

Internal method with reference to USEPA 8270, ISO 22032, USEPA 527 and USEPA 8321B. Dichloromethane extraction GC-MS

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	100	100	ND			
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	100	100	ND			
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	100	100	ND			
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	100	100	ND			



1T) Volatile Organic Compounds (VOC)

Internal method with reference to ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D Add ISO 20595 Static headspace for determination of VOC in wastewater for Benzene & Xylene; ISO 11423-1 Headspace or Purge and trap GC-MS EPA 8270 BS EN 12673-1999 for m-cresol, o-cresol, p-cresol; HJ 1067 or EPA 8260D or ISO 11423-1 for Toluene

Test Parameters	CAS Number	Reporting Limit		Result (µg/L)			
		TEXTILE	Lab	Raw 1001			
Benzene	71-43-2	1	1	ND			
m-cresol	108-39-4	1	1	ND			
o-cresol	95-48-7	1	1	ND			
p-cresol	106-44-5	1	1	ND			
Toluene	108-88-3	1	1	ND			
Xylene	1330-20-7	1	1	ND			



2) Test result - Wastewater / Metals

Internal method with reference to ISO 17294; USEPA 200.7; USEPA 200.8; USEPA 6010C; USEPA 6020A; USEPA 6020B; USEPA 3015A and Chromium (VI): USEPA 218.6, EN ISO 18412

Test Parameters	Reporting limit, TEXTILE				Legal limit [#]	Result (mg/L)			
	Foundational	Progressive	Aspirational	Lab		Effluent I002			
Antimony	0.1	0.05	0.01	0.01	-	ND			
Chromium (VI)	0.05	0.005	0.001	0.001	-	ND			
Barium	Sample & report			0.001	-	ND			
Selenium	Sample & report			0.001	-	ND			
Tin	Sample & report			0.001	-	ND			
Arsenic	0.05	0.01	0.005	0.005	-	0.005			
Total Chromium	0.2	0.1	0.05	0.05	0.5	ND			
Cobalt	0.05	0.02	0.01	0.01	0.5	ND			
Cadmium	0.1	0.05	0.01	0.01	0.02	ND			
Copper	1	0.5	0.25	0.25	-	ND			
Lead	0.1	0.05	0.01	0.01	0.1	ND			
Nickel	0.2	0.1	0.05	0.05	1	ND			
Silver	0.1	0.05	0.005	0.005	-	ND			
Zinc	5	1	0.5	0.5	-	ND			
Mercury	0.01	0.005	0.001	0.001	-	ND			

[#] Legal requirement based on regulation or standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters.

3) Test result - Wastewater / Conventional and Anions

Test Parameters	Test Method	Reporting limit, TEXTILE				Legal limit#	Result		Unit
		Foundational	Progressive	Aspirational	Lab		Effluent 1002		
pH	Wrt. ISO 10523, EPA 150.2 & APHA 4500-H+	6-9			NA	6-9	7.63		pH
Temperature difference	Wrt. USEPA 170.1 or GB/T 13195	Δ+15	Δ+10	Δ+5	NA	≤5	2.66		°C
E.coli	Wrt. APHA 9221 B & F	126 MPN/100-ml			1.8	-	ND		MPN/100-ml
Colour (436 nm)	Reference to ISO 7887: 2011(E), B	7	5	2	NA	-	3.4		m-1
Colour (525 nm)		5	3	1	NA	-	1.8		
Colour (620 nm)		3	2	1	NA	-	1		
Persistent foam	Visual estimation	No indication of persistent foam in receiving water			NA	-	Absent		-
Wastewater flowrate	-	15 m ³ /day			NA	-	3,606.72		m ³ /day
Ammonium-Nitrogen	Wrt. APHA-4500-NH3 B&F	10	1	0.5	0.5	-	0.56		mg/L
AOX	Wrt. EN ISO 9562 (Mod.)	3	0.5	0.1	0.1	-	0.34		mg/L
BOD ₅	Wrt. APHA 5210B & HJ 505 (5 days)	30	15	8	8	30	15.4		mg/L
COD	Wrt. APHA 5220 D	150	80	40	40	200	57		mg/L
DO	Wrt. Hach manual for LDO & In-house	≥ 4			-	-	6.1		mg/L
Oil & Grease	Wrt. EPA 1664B & APHA 5520 B & F	10	2	0.5	0.5	10	2.3		mg/L

Legal requirement based on regulation or standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters.



3) Test result - Wastewater / Conventional and Anions (continue)

Test Parameters	Test Method	Reporting limit, TEXTILE				Legal limit#	Result		Unit
		Foundational	Progressive	Aspirational	Lab		Effluent 1002		
Total Phenols / Phenol Index	Wrt. APHA 5530 C	0.5	0.01	0.001	0.001	1	0.001		mg/L
Total Chlorine	Wrt. ISO 7393-2, EPA 330.5 or HJ 586	1			0.1	-	0.2		mg/L
TDS	Wrt. APHA 2540C	Sample & report			5	2100	2084		mg/L
Total Nitrogen	Wrt. DIN EN ISO 11905-1 (Mod.)	20	10	5	5	-	ND		mg/L
Total Phosphorus	Wrt. APHA 4500-P; E	3	0.5	0.1	0.1	-	0.78		mg/L
TSS	Wrt. APHA 2540D, GB 11901, ISO 11923	50	15	5	5	100	10		mg/L
Chloride	Wrt. APHA 4500-Cl	Sample & report			1	-	109.97		mg/L
Cyanide, total	Wrt. APHA-4500-CN. C&E, EPA 9010C, 9013 & 9014	0.2	0.1	0.05	0.05	-	ND		mg/L
Sulphate	Wrt. APHA 4500-SO4-E	Sample & report			3	-	17.18		mg/L
Sulphide	Wrt. APHA 4500-S2-D	0.5	0.05	0.01	0.01	2	0.07		mg/L
Sulphite	Wrt. EPA 377.1 & APHA 4500-SO3 2-B	2	0.5	0.2	0.2	-	1		mg/L

Legal requirement based on regulation or standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters.



4A) Test result - Sludge / MRSL Sludge Disposal Pathway = C
Sludge - AP & APEOs

Internal method with reference to NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS))
 OPEO/NPEO (n>2): ISO 18857-2

Test Parameters	CAS Number	Reporting Limit		Result			Unit
		TEXTILE	Lab	Sludge 1003			
NPEO	Multiple 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	0.4	0.4	ND			mg/kg
NP, mixed isomers	Multiple 104-40-5, 11066-49-2, 25154-52-3, 84852-15-3	0.4	0.4	ND			mg/kg
OPEO	Multiple 9002-93-1, 9036-19-5, 68987-90-6	0.4	0.4	ND			mg/kg
OP, mixed isomers	Multiple 140-66-9, 1806-26-4, 27193-28-8	0.4	0.4	ND			mg/kg

Sludge - PAHs

Internal method with reference to US EPA 8270 DIN 38407-39 Solvent extraction GC/MS

Test Parameters	CAS Number	Reporting Limit		Result			Unit
		TEXTILE	Lab	Sludge 1003			
Acenaphthene	83-32-9	0.2	0.2	ND			mg/kg
Acenaphthylene	208-96-8	0.2	0.2	ND			mg/kg
Anthracene	120-12-7	0.2	0.2	ND			mg/kg
Benzo[a]anthracene	56-55-3	0.2	0.2	ND			mg/kg
Benzo[a]pyrene (BaP)	50-32-8	0.2	0.2	ND			mg/kg
Benzo[b]fluoranthene	205-99-2	0.2	0.2	ND			mg/kg
Benzo[e]pyrene	192-97-2	0.2	0.2	ND			mg/kg
Benzo[ghi]perylene	191-24-2	0.2	0.2	ND			mg/kg
Benzo[j]fluoranthene	205-82-3	0.2	0.2	ND			mg/kg
Benzo[k]fluoranthene	207-08-9	0.2	0.2	ND			mg/kg
Chrysene	218-01-9	0.2	0.2	ND			mg/kg
Dibenz[a,h]anthracene	53-70-3	0.2	0.2	ND			mg/kg
Fluoranthene	206-44-0	0.2	0.2	ND			mg/kg
Fluorene	86-73-7	0.2	0.2	ND			mg/kg
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	0.2	ND			mg/kg
Naphthalene	91-20-3	0.2	0.2	ND			mg/kg
Phenanthrene	85-01-8	0.2	0.2	ND			mg/kg
Pyrene	129-00-0	0.2	0.2	ND			mg/kg

Sludge - Chlorotoluenes

Internal method with reference to USEPA 8260D, 8270E, Purge and Trap, Head Space
 Dichloromethane extraction followed by GC-MS

Test Parameters	CAS Number	Reporting Limit		Result			Unit
		TEXTILE	Lab	Sludge 1003			
Other isomers of mono-, di-, tri-, tetra-, and penta-chlorotoluene	Multiple 95-49-8, 108-41-8, 106-43-4, 32768-54-0, 95-73-8, 19398-61-9, 118-69-4/ 95-75-0/ 25186-47-4/ 7359-72-0/ 2077-46-5/ 6639-30-1/ 23749-65-7/ 1006-32-2/ 875-40-1/ 877-11-2	0.2	0.2	ND			mg/kg



4B) Test result - Sludge / Metals **Sludge Disposal Pathway = C**

Internal method with reference to USEPA 218.6, EN ISO 18412, USEPA 3060A, USEPA 7196, Chromium VI: EPA 6020B, EPA 6010D, EPA 3050, USEPA 200.7, USEPA 200.8, USEPA 6010c, USEPA 6020a, Others metal: EPA 7471b, USEPA 6020B, Mercury: USEPA 3015A

Test Parameters	Reporting Limit		Maximum Total Metals Limits Disposal Pathway G	Threshold Values	Result			Unit
	TEXTILE	Lab			Sludge I003			
Antimony	5	5	NA	12	NA		mg/kg	
Arsenic	5	5	41	10	NA		mg/kg	
Barium	200	200	500	700	NA		mg/kg	
Cadmium	1	1	39	3	NA		mg/kg	
Cobalt	400	400	NA	1600	NA		mg/kg	
Copper	50	50	1500	200	NA		mg/kg	
Lead	5	5	400	10	NA		mg/kg	
Nickel	20	20	420	70	NA		mg/kg	
Selenium	5	5	36	10	NA		mg/kg	
Silver	50	50	NA	100	NA		mg/kg	
Zinc	400	400	2800	1000	NA		mg/kg	
Total Chromium	50	50	1200	100	NA		mg/kg	
Chromium (VI)	20	20	50	50	NA		mg/kg	
Mercury	1	1	17	1	NA		mg/kg	

Test result - Leachate / Metals **Sludge Disposal Pathway = C**

Internal method with reference to leachate Preparation: USEPA 1311, Leachate Analysis: USEPA 7196 For Chromium (VI) & Acid Digestion EPA 3051A; Analysis: USEPA 200.7, USEPA 200.8, USEPA 6010c & USEPA 6020a (Others Metal)

Test Parameters	Reporting	Sludge disposal pathway					Result			Unit
	Lab	A, B, C	D	E	F	G	Leachate			
Antimony	0.6	NA	7.8	0.6	0.6	0.6	NA		mg/L	
Arsenic	0.5	NA	2.75	0.5	0.5	0.5	NA		mg/L	
Barium	35	NA	67.5	35	35	35	NA		mg/L	
Cadmium	0.15	NA	0.58	0.15	0.15	0.15	NA		mg/L	
Cobalt	80	NA	80	80	80	80	NA		mg/L	
Copper	10	NA	17.5	10	10	10	NA		mg/L	
Lead	0.5	NA	2.75	0.5	0.5	0.5	NA		mg/L	
Nickel	3.5	NA	11.75	3.5	3.5	3.5	NA		mg/L	
Selenium	0.5	NA	0.75	0.5	0.5	0.5	NA		mg/L	
Silver	5	NA	5	5	5	5	NA		mg/L	
Zinc	50	NA	50	50	50	50	NA		mg/L	
Total Chromium	5	NA	5	5	5	5	NA		mg/L	
Chromium (VI)	2.5	NA	3.75	2.5	2.5	2.5	NA		mg/L	
Mercury	0.5	NA	0.125	0.05	0.05	0.05	NA		mg/L	



4C) Test result - Sludge / Conventional & Anion			Sludge Disposal Pathway =					C			
Test Parameters	Test Method	Reporting Limit	Sludge disposal pathway					Result			Unit
		Lab	A, B, C	D	E	F	G	Sludge 1003			
pH	Wrt. EPA SW 9045D	NA	NA	5-11	5-11	6.5-9	6.5-9	NA			-
Fecal Coliform	Wrt. APHA 9221C, 9222E	1.8	NA	NA	NA	<1000	<1000	NA			MPN/100 ml
% Solids	Wrt. EPA 160.3, HJ613 at 105 degree C	NA	Sample & report					23.01			%
Paint Filter Test	Wrt. EPA 9095B	NA	NA	Pass	Pass	Pass	Pass	NA			-
Cyanide	Wrt. APHA-4500-CN. C&E, EPA 9010C, 9013 & 9014	70	NA	85	70	70	70	NA			mg/kg

Appendix A - Discharge limit according to regulation

[Environmental Conservation Rules' 2023 (Bangladesh): For Dyeing / Washing and Printing [Schedule 5 (2)]:

Sl No.	Test Parameters For Wastewater	Unit	Limitation Value of Legal Requirements (ECR)
1	Temperature	°C	≤5
2	TSS	mg/L	100
3	COD	mg/L	200
4	pH	Range	6-9
5	Color	Pt-Co	150
6	BOD5	mg/L	30
7	Oil and Grease	mg/L	10
8	Phenol / Phenol Index	mg/L	1
9	Sulfide	mg/L	2
10	Total Dissolved Solids	mg/L	2100
11	Chromium, total	mg/L	0.5
12	Cobalt	mg/L	0.5
13	Nickel	mg/L	1
14	Cadmium	mg/L	0.02
15	Lead	mg/L	0.1

Appendix B - Photos of sampling points and samples (with relative time and date)

Photo of sampling point
12/04/2025; 13:34



Untreated wastewater

Photo of sample (labelled sample bottle)
12/04/2025; 18:39



Untreated wastewater

Photo of sampling point
12/04/2025; 13:37



Effluent

Photo of sample (labelled sample bottle)
12/04/2025; 18:46



Effluent

Photo of persistent foam
12/04/2025; 13:37



Effluent



Appendix B - Photos of sampling points and samples (with relative time and date) (continue)

Photo of sampling point
12/04/2025; 13:38



Sludge

Photo of sample (labelled sample bottle)
12/04/2025; 15:11



Sludge



BUREAU VERITAS

Appendix C - Field Data Form (continue)

ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration										CPSD-AN-00613-DATA 07								
										Issue Date:								
										Version No.: 1								
										Business Line: Analytical								
ZDHC Wastewater Flow Device Dimensions																		
Measurement (cm)	Meter	Pipe (O)	Flume (U)	Wier (V)														
Diameter	--	--	--	--														
Depth	--	--	--	--														
ZDHC Wastewater Sampling Field Testing QA/QC																		
Parameter	Lab Control Sample (LCS) Known			Lab Control Sample (LCS) Measured			Accuracy (%)											
pH	4.00			4.01			100.25%											
Total Chlorine	0.50			0.49			98%											
ZDHC Wastewater Sample Collection Field Test Measurements																		
Incoming Sample Point																		
<input type="radio"/> Composite Sample <input type="radio"/> Grab Sample																		
Sampling Locations:										GPS coordinates: Lat.: N / S		Long.: E / W						
Sampling Method:										Start Time:		Stop Time:						
<input checked="" type="radio"/> Manual <input type="radio"/> Autosampler - Sampling Device Description/ Owner:																		
Sampling Time (Hours)	0	1	2	3	4	5	6	Average										
Recording time of discrete sample								--										
Colour (visual estimation):								--										
Treated Sample Point																		
<input checked="" type="radio"/> Composite Sample <input type="radio"/> Grab Sample																		
Sampling Locations:										GPS coordinates: Lat.: N / S 24.2270226		Long.: E / W 91.3600783						
Sampling Method:										Start Time: 12.00		Stop Time: 19.00						
<input checked="" type="radio"/> Manual <input type="radio"/> Autosampler - Sampling Device Description/ Owner:																		
Sampling Time (Hours)	0	1	2	3	4	5	6	Average										
Recording time of discrete sample	12.20	13.20	14.20	15.20	16.20	17.20	18.20	--										
Colour (visual estimation):	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue										
Effluent Sample Point																		
<input checked="" type="radio"/> Composite Sample <input type="radio"/> Grab Sample																		
Sampling Locations:										GPS coordinates: Lat.: N / S 24.2230449		Long.: E / W 91.3597343						
Sampling Method:										Start Time: 12.00		Stop Time: 19.00						
<input checked="" type="radio"/> Manual <input type="radio"/> Autosampler - Sampling Device Description/ Owner:																		
Sampling Time (Hours)	0	1	2	3	4	5	6	Average										
Recording time of discrete sample	12.30	13.30	14.30	15.30	16.30	17.30	18.30	--										
Temperature (°C)	VWV Discharge		32.4		33.2		32.6		32.9		33.1		33.4		32.6		32.86	
	Receiving Water		30.2															
pH	7.6		7.7		7.5		7.6		7.7		7.6		7.7		7.63			
Dissolved Oxygen (mg/L):	5.98		6.12		6.19		6.08		5.89		6.21		6.27		6.10			
Total Chlorine (mg/L):	0.20		0.20		0.20		0.20		0.20		0.20		0.20		0.20			
Persistent Foam (Yes/No):	Yes / No		Yes / No		Yes / No		Yes / No		Yes / No		Yes / No		Yes / No		Yes / No			
Wastewater Flow Meter (L/min) m ³ /h	146		168		139		147		164		145		153		150.28			
Alternate Measured Flow:	Depth (cm)		/		/		/		/		/		/		/			
	Velocity (cm/sec)		/		/		/		/		/		/		/			
Colour (visual estimation):	L. Brown		L. Brown		L. Brown		L. Brown		L. Brown		L. Brown		L. Brown		L. Brown			
Volume collected (L):	0.15x24		0.15x24		0.15x24		0.15x24		0.15x24		0.15x24		0.15x24		0.15x24			
Total volume collected (L):	25.2		Collect 3.33-litres each hour for a total minimum volume of 20-litres															
Sludge Sample Point																		
<input checked="" type="radio"/> Composite Sample <input type="radio"/> Grab Sample																		
Sampling Locations:										GPS coordinates: Lat.: N / S 24.2229846		Long.: E / W 91.3596457						
Sampling Method:										Start Time: 12.00		Stop Time: 19.00						
<input checked="" type="radio"/> Manual <input type="radio"/> Autosampler - Sampling Device Description/ Owner:																		
Sampling Time (Hours)	0	1	2	3	4	5	6	Average										
Recording time of discrete sample	15.00							--										
Colour (visual estimation):	Black (Semi-Solid)																	
Comments/ Other Observations																		