



TEST REPORT NO : 1001889431

Apr.6,2023

UL ORDER NO : 14745206

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Factory : TARASIMA APPARELS LTD.
Address : GOLORA, KOITTA, SATURIA, MANIKGANJ-1810, BANGLADESH
Contact Person : MR. KAMRUZZAMAN
Reference Testing Protocol: ZDHC Wastewater Guidelines Version 2.1
Reference Sample Handling Method: ZDHC Sampling and Analysis Plan (SAP) Version 2.1
Sample Collected By: UL VS Bangladesh Ltd.
Sampler accreditation certification number (ZDHC): C74D106817971
Sludge Disposal Pathway: A – Offsite Incineration at >1000°C

Sampling Date : Mar.29,2023
Laboratory Received Date : Mar.29,2023
Test Date : Mar.29–Apr.6,2023
Buyer Name: Self Reference
Sampling Time Discharge Water: Grab: 12.00pm
Sampling Time Sludge: Grab: 10.45am
Discharge Method: Direct Discharge

Sample Information :

Sample ID	Description	Equivalent Code / Color
001	Wastewater After Treatment-Water at discharge point	Light Grey
002	Wastewater Before Treatment	Light Blue
003	Sludge	Grey

For and on behalf of
UL VS Bangladesh Limited

Md. Nur Alam – Lab Technical & Operations Manager

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Test Table	Executive Summary	Result		
		001	002	003
1A-1T	Untreated Wastewater Parameters:			
1A	Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs)	/	PASS	/
1B	Anti- Microbials & Biocides	/	PASS	/
1C	Chlorinated Parafins	/	PASS	/
1D	Chlorobenzenes and Chlorotoluenes	/	PASS	/
1E	Chlorophenols	/	PASS	/
1F	N,N-di-methylformamide (DMFa)	/	PASS	/
1G	Dyes – Carcinogenic or Equivalent Concern	/	PASS	/
1H	Dyes – Disperse (Allergenic)	/	PASS	/
1I	Dyes – Navy Blue Colourant	/	PASS	/
1J	Flame retardants	/	PASS	/
1K	Glycols / Glycol Ethers	/	PASS	/
1L	Halogenated Solvents	/	PASS	/
1M	Organotin Compounds	/	PASS	/
1N	Other/Miscellaneous Chemicals	/	PASS	/
1O	Perfluorinated and Polyfluorinated Chemicals (PFCs)	/	PASS	/
1P	Phthalates – including all other esters of ortho-phthalic acid	/	PASS	/
1Q	Polycyclic Aromatic Hydrocarbons (PAHs)	/	PASS	/
1R	Restricted Aromatic Amines (Cleavable from Azo-colourants)	/	PASS	/
1S	UV Absorbers	/	PASS	/
1T	Volatile Organic Compounds (VOC)	/	PASS	/
2	Metals (Heavy Metals Effluent/ Treated Wastewater Parameters):	PASS	/	/
3	Conventional Parameters and Anions for Effluent/ Treated Wastewater:			
	pH Value	PASS	/	/
	Temperature Deference	PASS	/	/
	E.coli ♦	PASS	/	/
	Colour (436nm, 525nm, 620nm)	PASS	/	/
	Persistent Foam	PASS	/	/
	Wastewater Flowrate	See Result	/	/
	Ammonium-Nitrogen	PASS	/	/
	Absorbable Organic Halogens (AOX)	PASS	/	/
	Biological Oxygen Demand (BOD) (5-day)	PASS	/	/
	Chemical Oxygen Demand (COD)	PASS	/	/
	Dissolved Oxygen (DO)	See Result	/	/
	Oil & Grease	PASS	/	/
	Total Phenols / Phenol Index	PASS	/	/

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	Total Chlorine	See Result	/	/
	Total Dissolved Solids (TDS)	See Result	/	/
	Total Nitrogen	PASS	/	/
	Total Phosphorus	PASS	/	/
	Total Suspended Solids (TSS)	PASS	/	/
	Chloride	See Result	/	/
	Cyanide, total	PASS	/	/
	Sulfate	See Result	/	/
	Sulfide	PASS	/	/
	Sulfite	PASS	/	/
4A	Sludge Disposal Pathways Parameters:			
	Total Metals	/	/	PASS
	Cyanide	/	/	PASS
	pH Value	/	/	See Result
	% Solids (Dry mass)	/	/	See Result
	Paint Filter Test	/	/	See Result
	Fecal Coliform ♦	/	/	See Result
	Alkyphenol (AP) & Alkyphenol ethoxylates (APEOs)	/	/	PASS
	Polycyclic Aromatic Hydrocarbons (PAHs)	/	/	PASS
	Chloro-Toluenes	/	/	PASS

Remark:

1. The results relate only to the samples tested.
2. "ND"=Not Detected, "NA"=Not Applicable,
3. ** = test result(s) will be added later
4. ♦ Marked test was subcontracted to an ISO 17025 accredited laboratory.

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1A-1T) Wastewater Parameters:

(1A) Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs):

Standard Method for Analysis/Testing: 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

Detection Limit: 5 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Nonylphenol ethoxylates (NPEO)	9016-45-9, 26027-38-3 37205-87-1, 68412-54-4 127087-87-0	5	ND
Nonylphenol (NP), mixed isomers	104-40-5, 11066-49-2 25154-52-3, 84852-15-3	5	ND
Octylphenol ethoxylates (OPEO)	9002-93-1, 9036-19-5 68987-90-6	5	ND
Octylphenol (OP), mixed isomers	140-66-9, 1806-26-4 27193-28-8	5	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

(1B) Anti- Microbials & Biocides:

Standard Method for Analysis/Testing: USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999 an alternative method of solvent extraction and derivatization are included, USEPA 8270E Solvent extraction, followed by GC-MS ISO 14154:2005 An alternate method, without derivatization and determination by LCMS/LCMSMS

Substance name	CAS No.	Detection limit, µg/L	Reporting limit, µg/L	Result, µg/L (002)
o-Phenylphenol (+salts)	90-43-7	100	100	ND
Triclosan	3380-34-5	100	100	ND
Permethrin	Multiple	500	500	ND
Conclusion				PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;				

(1C) Chlorinated Paraffins:

Standard Method for Analysis/Testing: Preparation: EPA 3510 Analysis: ISO18219-2:2021 Method for MCCP/SCCP with GC-MS(NCI) or LC-MS/MS

Detection Limit: 5 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	5	ND
Short-chain Chlorinated paraffin (C10 – C13)	85535-84-8	5	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

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(1D) Chlorobenzenes and Chlorotoluenes:

Standard Method for Analysis/Testing: USEPA 8260D, 8270E, Purge and Trap, Head Space Dichloromethane extraction followed by GC-MS

Detection Limit: 0.2 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
1,2-dichlorobenzene	95-50-1	0.2	ND
Other isomers of mono-, di-, tri-, tetra-, penta- and hexa- Chlorobenzene and mono-, di-, tri-, tetra- and penta- chlorotoluene	Multiple	0.2	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

(1E) Chlorophenols:

Standard Method for Analysis/Testing: 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

Detection Limit: 0.5 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Pentachlorophenols (PCP)	87-86-5	0.5	ND
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	ND
2,3,4,6-Tetrachlorophenol	58-90-2	0.5	ND
2,3,5,6-tetrachlorophenol	935-95-5	0.5	ND
2,4,6-trichlorophenol	88-06-2	0.5	ND
2,3,4-trichlorophenol	15950-66-0	0.5	ND
2,3,5-trichlorophenol	933-78-8	0.5	ND
2,3,6-trichlorophenol	933-75-5	0.5	ND
2,4,5-trichlorophenol	95-95-4	0.5	ND
3,4,5-trichlorophenol	609-19-8	0.5	ND
2,3-dichlorophenol	576-24-9	0.5	ND
2,4-dichlorophenol	120-83-2	0.5	ND
2,5-dichlorophenol	583-78-8	0.5	ND
2,6-dichlorophenol	87-65-0	0.5	ND
3,4-dichlorophenol	95-77-2	0.5	ND
3,5-dichlorophenol	591-35-5	0.5	ND
2-Chlorophenol	95-57-8	0.5	ND
3-Chlorophenol	108-43-0	0.5	ND
4-Chlorophenol	106-48-9	0.5	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

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- (1F) **N,N-di-methylformamide (DMFa):**
Standard Method for Analysis/Testing: EPA 8015, EPA 8270E
Detection Limit: 1000 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Dimethyl formamide; N,N-dimethylformamide (DMFa)	68-12-2	1000	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;			

- (1G) **Dyes – Carcinogenic or Equivalent Concern:**
Standard Method for Analysis/Testing: Liquid extraction, LC-MS
Detection Limit: 500 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Basic violet 3 with >0.1% of Michler’s Ketone	548-62-9	500	ND
C.I. Acid Red 26	3761-53-3	500	ND
C.I. Acid Violet 49	1694-09-3	500	ND
C.I. Basic Blue 26 (with Michler’s Ketone > 0.1%)	2580-56-5	500	ND
C.I. Basic Green 4 (Malachite Green Chloride)	569-64-2	500	ND
C.I. Basic Green 4 (Malachite Green Oxalate)	2437-29-8	500	ND
C.I. Basic Green 4 (Malachite Green)	10309-95-2	500	ND
C.I. Basic Red 9	569-61-9	500	ND
C.I. Basic Violet 14	632-99-5	500	ND
C.I. Direct Black 38	1937-37-7	500	ND
C.I. Direct Blue 6	2602-46-2	500	ND
C.I. Direct Red 28	573-58-0	500	ND
C.I. Disperse Blue 1	2475-45-8	500	ND
C.I. Disperse Blue 3	2475-46-9	500	ND
Disperse Orange 11	82-28-0	500	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;			

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(1H) **Dyes – Disperse (Allergenic):**

Standard Method for Analysis/Testing: Liquid extraction, LC-MS

Detection Limit: 50 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Disperse Blue 102	12222-97-8	50	ND
Disperse Blue 106	12223-01-7	50	ND
Disperse Blue 124	61951-51-7	50	ND
Disperse Blue 26	3860-63-7	50	ND
Disperse Blue 35	12222-75-2	50	ND
Disperse Blue 35	56524-77-7	50	ND
Disperse Blue 7	3179-90-6	50	ND
Disperse Brown 1	23355-64-8	50	ND
Disperse Orange 1	2581-69-3	50	ND
Disperse Orange 3	730-40-5	50	ND
Disperse Orange 37/59/76	13301-61-6	50	ND
Disperse Red 1	2872-52-8	50	ND
Disperse Red 11	2872-48-2	50	ND
Disperse Red 17	3179-89-3	50	ND
Disperse Yellow 1	119-15-3	50	ND
Disperse Yellow 3	2832-40-8	50	ND
Disperse Yellow 39	12236-29-2	50	ND
Disperse Yellow 49	54824-37-2	50	ND
Disperse Yellow 9	6373-73-5	50	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre;			

(1I) **Dyes – Navy Blue Colourant:**

Standard Method for Analysis/Testing: Liquid extraction, LC-MS

Detection Limit: 500 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	500	ND
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	500	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre;			

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(1J) Flame retardants:

Standard Method for Analysis/Testing: USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS), determined as total boron via ICP

Substance name	CAS No.	Detection limit, µg/L	Reporting limit, µg/L	Result, µg/L (002)
2,2-bis(bromomethyl)- 1,3-propanediol (BBMP)	3296-90-0	25	25	ND
Bis(2,3-dibromopropyl) phosphate (BIS)	5412-25-9	25	25	ND
Decabromodiphenyl ether (DecaBDE)	1163-19-5	25	25	ND
Hexabromocyclodecane (HBCDD)	3194-55-6	25	25	ND
Octabromodiphenyl ether (OctaBDE)	32536-52-0	25	25	ND
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	25	ND
Polybromobiphenyls (PBB)	59536-65-1	25	25	ND
Tetrabromobisphenol A (TBBPA)	79-94-7	25	25	ND
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	25	ND
Tris(1-aziridinyl)phosphine 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
Decabromobiphenyl (DecaBB)	13654-09-6	25	25	ND
Dibromobiphenyls (DiBB)	Multiple	25	25	ND
Octabromobiphenyls (OctaBB)		25	25	ND
Dibromopropylether	21850-44-2	25	25	ND
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	25	ND
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	25	ND
Monobromobiphenyls (MonoBB)	Multiple	25	25	ND
Monobromodiphenylethers (MonoBDEs)		25	25	ND
Nonabromobiphenyls (NonaBB)		25	25	ND
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	25	ND

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Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	25	ND
Tribromodiphenylethers (TriBDEs)	Multiple	25	25	ND
Boric acid	10043-35-3 11113-50-1	100	100	ND
Diboron trioxide	1303-86-2	100	100	ND
Disodium octaborate	12008-41-2	100	100	ND
Disodium tetraborate anhydrous	1303-96-4 1330-43-4	100	100	ND
Tetraboron disodium heptaoxide, hydrate	12267-73-1	100	100	ND
Conclusion				PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;				

(1K) Glycols / Glycol Ethers:Standard Method for Analysis/Testing: USEPA 8270E Liquid extraction, LC-MS GC-MS
Detection Limit: 50 µg/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
2-ethoxyethanol	110-80-5	50	ND
2-ethoxyethyl acetate	111-15-9	50	ND
2-methoxyethanol	109-86-4	50	ND
2-methoxyethylacetate	110-49-6	50	ND
2-methoxypropylacetate	70657-70-4	50	ND
Bis(2-methoxyethyl)-ether	111-96-6	50	ND
Ethylene glycol dimethyl ether	110-71-4	50	ND
Triethylene glycol dimethyl ether	112-49-2	50	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

(1L) Halogenated Solvents:Standard Method for Analysis/Testing: USEPA 8260D Headspace GC-MS or Purge and trap GC-MS
Detection Limit: 1 µg/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
1,2-dichloroethane	107-06-2	1	ND
Methylene chloride	75-09-2	1	ND
Tetrachloroethylene	127-18-4	1	ND
Trichloroethylene	79-01-6	1	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

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(1M) Organotin Compounds:Standard Method for Analysis/Testing: ISO 17353 Derivatisation with NaB (C₂H₅)₄ GC-MS/ ISO 17353

Detection Limit: 0.01 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Dipropyltin compounds (DPT)	Multiple	0.01	ND
Mono-, di- and tri-butyltin derivatives		0.01	ND
Mono-, di- and tri-methyltin derivatives		0.01	ND
Mono-, di- and tri-octyltin derivatives		0.01	ND
Mono-, di- and tri-phenyltin derivatives		0.01	ND
Tetrabutyltin compounds (TeBT)		0.01	ND
Tripropyltin Compounds (TPT)		0.01	ND
Tetraoctyltin compounds (TeOT)		0.01	ND
Tricyclohexyltin (TCyHT)		0.01	ND
Tetraethyltin Compounds (TeET)		0.01	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;			

(1N) Other/Miscellaneous Chemicals:

Standard Method for Analysis/Testing: Liquid extraction, LC-MSMS, determined as total boron and total zinc via ICP

Substance name	CAS No.	Detection limit, µg/L	Reporting limit, µg/L	Result, µg/L (002)
AEEA [2-(2-aminoethylamino)ethanol]	111-41-1	500	500	ND
Bisphenol A	80-05-7	10	10	ND
Thiourea	62-56-6	50	50	ND
Quinoline	91-22-5	50	50	ND
Borate, zinc salt	12767-90-7	100	100	ND
Conclusion				PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;				

(1O) Perfluorinated and Polyfluorinated Chemicals (PFCs):

Standard Method for Analysis/Testing: 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

Substance name	CAS No.	Detection limit, µg/L	Reporting limit, µg/L	Result, µg/L (002)
Perfluorooctane sulfonate (PFOS) and related substances	Multiple	0.01	0.01	ND
Perfluorooctanoic acid (PFOA) and related substances		1	1	ND
Conclusion				PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;				

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

Standard Method for Analysis/Testing: USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS
Detection Limit: 10 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
1,2-benzenedicarboxylic acid, di-C6-8 branched and linear alkyl esters, C7-rich (DIHP)	71888-89-6 84777-06-0	10	ND
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)	68515-42-4 68515-50-4	10	ND
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	10	ND
Butyl benzyl phthalate (BBP)	85-68-7	10	ND
Di-cyclohexyl phthalate (DCHP)	84-61-7	10	ND
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	ND
Di-iso-octyl phthalate (DIOP)	27554-26-3	10	ND
Di-isobutyl phthalate (DIBP)	84-69-5	10	ND
Di-isononyl phthalate (DINP)	28553-12-0	10	ND
Di-n-hexyl phthalate (DnHP)	84-75-3	10	ND
Di-n-octyl phthalate (DNOP)	117-84-0	10	ND
Di-n-pentylphthalates	131-18-0	10	ND
Di-n-propyl phthalate (DPRP)	131-16-8	10	ND
Di(ethylhexyl) phthalate (DEHP)	117-81-7	10	ND
Dibutyl phthalate (DBP)	84-74-2	10	ND
Diethyl phthalate (DEP)	84-66-2	10	ND
Diisopentylphthalates	605-50-5	10	ND
Dinonyl phthalate (DNP)	84-76-4	10	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre”;			

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(1Q) Polycyclic Aromatic Hydrocarbons (PAHs):

Standard Method for Analysis/Testing: USEPA 8270E DIN 38407-39 Solvent extraction GC-MS

Detection Limit: 1 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Acenaphthene	83-32-9	1	ND
Acenaphthylene	208-96-8	1	ND
Anthracene	120-12-7	1	ND
Benzo[a]anthracene	56-55-3	1	ND
Benzo[a]pyrene (BaP)	50-32-8	1	ND
Benzo[b]fluoranthene	205-99-2	1	ND
Benzo[e]pyrene	192-97-2	1	ND
Benzo[ghi]perylene	191-24-2	1	ND
Benzo[j]fluoranthene	205-82-3	1	ND
Benzo[k]fluoranthene	207-08-9	1	ND
Chrysene	218-01-9	1	ND
Dibenz[a,h]anthracene	53-70-3	1	ND
Fluoranthene	206-44-0	1	ND
Fluorene	86-73-7	1	ND
Indeno[1,2,3-cd]pyrene	193-39-5	1	ND
Naphthalene	91-20-3	1	ND
Phenanthrene	85-01-8	1	ND
Pyrene	129-00-0	1	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “µg/L” means “microgram per litre;			

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

Standard Method for Analysis/Testing: Reduction step with sodium dithionite, solvent extraction EPA 8270

Detection Limit: 0.1 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
2-naphthylamine	91-59-8	0.1	ND
2-Naphthylammoniumacetate	553-00-4	0.1	ND
2,4-xylidine	95-68-1	0.1	ND
2,4,5-trimethylaniline	137-17-7	0.1	ND
2,4,5-trimethylaniline ydrochloride	21436-97-5	0.1	ND
2,6-xylidine	87-62-7	0.1	ND
3,3'-dichlorobenzidine	91-94-1	0.1	ND
3,3-dimethoxybenzidine	119-90-4	0.1	ND
3,3-dimethylbenzidine	119-93-7	0.1	ND
4-aminoazobenzene	60-09-3	0.1	ND
4-aminodiphenyl	92-67-1	0.1	ND
4-chloro-o-toluidine	95-69-2	0.1	ND
4-chloro-o-toluidinium chloride	3165-93-3	0.1	ND
4-chloroaniline	106-47-8	0.1	ND
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	0.1	ND
4-methoxy-m-phenylenediamine	615-05-4	0.1	ND
4-methyl-m-phenylenediamine	95-80-7	0.1	ND
4,4-methylene-bis-(2-chloro-aniline)	101-14-4	0.1	ND
4,4-methylenedi-o-toluidine	838-88-0	0.1	ND
4,4-methylenedianiline	101-77-9	0.1	ND
4,4-oxydianiline	101-80-4	0.1	ND
4,4-thiodianiline	139-65-1	0.1	ND
5-nitro-o-toluidine	99-55-8	0.1	ND
6-methoxy-m-toluidine	120-71-8	0.1	ND
Benzidine	92-87-5	0.1	ND
o-aminoazotoluene	97-56-3	0.1	ND
o-anisidine	90-04-0	0.1	ND
o-toluidine	95-53-4	0.1	ND
Conclusion			PASS
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(1S) UV Absorbers:

Standard Method for Analysis/Testing: USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B. Dichloromethane extraction GC-MS or LC-MS(-MS)
Detection Limit: 100 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	100	ND
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	100	ND
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	100	ND
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	100	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;			

(1T) Volatile Organic Compounds (VOC):

Standard Method for Analysis/Testing: ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D Add ISO 20595, EPA 8270 BS EN 12673-1999, HJ 1067 or EPA 8260D or ISO 11423-1

Detection Limit: 1 ug/L

Substance name	CAS No.	Reporting limit, µg/L	Result, µg/L (002)
Benzene	71-43-2	1	ND
m-cresol	108-39-4	1	ND
o-cresol	95-48-7	1	ND
p-cresol	106-44-5	1	ND
Xylene	1330-20-7	1	ND
Toluene	108-88-3	1	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “µg/L” means “microgram per litre;			

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(2) Metals (Heavy Metals Wastewater Parameters):

Standard Method for Analysis/Testing: ISO 17294, ISO 18412, USEPA 200.8 USEPA 6010C USEPA 6020A, USEPA 218.6, EPA 200.8-SIM EPA 6020A-SIM EPA 245.1 EPA 245.7

Substance name	CAS No.	Detection limit, mg/L	Result, mg/L (001)	Limit, mg/L	Conclusion
Total Antimony (Sb)	7440-36-0	0.01	ND	Foundational 0.1 Progressive 0.05 Aspirational 0.01	PASS
Hexavalent Chromium (Cr-VI)	18540-29-9	0.001	ND	Foundational 0.05 Progressive 0.005 Aspirational 0.001	
Total Arsenic (As)	7440-38-2	0.005	ND	Foundational 0.05 Progressive 0.01 Aspirational 0.005	
Total Chromium (Cr)	7440-47-3	0.05	ND	Foundational 0.2 Progressive 0.1 Aspirational 0.05	
Total Cobalt (Co)	7440-48-4	0.01	ND	Foundational 0.05 Progressive 0.02 Aspirational 0.01	
Total Cadmium (Cd)	7440-43-9	0.01	ND	Foundational 0.1 Progressive 0.05 Aspirational 0.01	
Total Copper (Cu)	7440-50-8	0.25	ND	Foundational 1.0 Progressive 0.5 Aspirational 0.25	
Total Lead (Pb)	7439-92-1	0.01	ND	Foundational 0.1 Progressive 0.05 Aspirational 0.01	
Total Nickel (Ni)	7440-02-0	0.05	ND	Foundational 0.2 Progressive 0.1 Aspirational 0.05	
Total Silver (Ag)	7440-22-4	0.005	ND	Foundational 0.1 Progressive 0.05 Aspirational 0.005	
Total Zinc (Zn)	7440-66-6	0.5	ND	Foundational 5.0 Progressive 1.0 Aspirational 0.5	
Total Mercury (Hg)	7439-97-6	0.001	ND	Foundational 0.01 Progressive 0.005 Aspirational 0.001	
Total Barium (Ba)	7440-39-3	0.5	ND	/	
Total Selenium (Se)	7782-49-2	0.5	ND	/	
Total Tin (Sn)	7440-31-5	0.5	ND	/	

"<" means "less than" ; "mg/L" means "milligram per litre; .

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(3) Conventional Parameters and Anions:

pH Value:

Standard Method for Analysis/Testing: ISO 10523, USEPA 150.1, SM 4500-H+

Sample ID	Result	Limit	Conclusion
001	7.0	6 - 9	PASS

Temperature difference:

Standard Method for Analysis/Testing: DIN 38 404-4, USEPA 170.1, SM 2550

Sample ID	Detection limit(°C)	Result (°C)		Limit, °C	Conclusion
001	0.1°C	Temperature difference (°C)	3.1	Foundational Δ+15 Progressive Δ+10 Aspirational Δ+5	PASS
		Temperature-Discharge Pipe (°C)	31.8		
		Temperature-Receiving Water (°C)	28.7		

"<" means "less than" ; "°C" Means "Degree Celsius"

E.coli:

Standard Method for Analysis/Testing: SM 9222D presumptive, confirm positive with SM9222G

Sample ID	Detection limit, MPN/100 ml	Result, MPN/100 ml	Limit, MPN/100 ml	Conclusion
001	10	<10	126 MPN/100 ml	PASS

"<" means "less than" ; "MPN" means "Most Probable Number"

Colour (436nm, 525nm, 620nm):

Standard Method for Analysis/Testing: ISO 7887-B

Sample ID	Detection limit (m-1)		Result (m-1)	Limit, (m-1)			Conclusion
				Foundation	Progressive	Aspirational	
001	436 nm	0.01	3.62	7	5	2	PASS
	525 nm	0.01	1.56	5	3	1	
	620 nm	0.01	0.83	3	2	1	

"<" means "less than" ;

Persistent Foam:

Standard Method for Analysis/Testing: Visual Analysis

Sample ID	Result	Limit	Conclusion
001	Absent	Absent	PASS

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Wastewater Flowrate:

In-House with Reference to ZDHC Guideline

Sample ID	Result, m3 per day	Minimum Limit, m3 per day	Conclusion
001	2400	15	DATA
"<" means "less than" ;			

Ammonium-Nitrogen:

Standard Method for Analysis/Testing: ISO 11732 ISO 7150, USEPA 350.1, USEPA 350.3, SM 4500 NH3 - D, E, F, G, or H

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.5	<0.5	Foundational 10 Progressive 1 Aspirational 0.5	PASS
"<" means "less than" ; "mg/L" means "milligram per litre";				

Absorbable Organic Halogens (AOX):

Standard Method for Analysis/Testing: ISO 9562, HACH LCK 390

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.1	0.16	Foundational 3.0 Progressive 0.5 Aspirational 0.1	PASS
"<" means "less than" ; "mg/L" means "milligram per litre";				

Biological Oxygen Demand (BOD) (5-day):

Standard Method for Analysis/Testing: ISO 5815-1, USEPA 405.1, SM 5210-B

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	2	24	Foundational 30 Progressive 15 Aspirational 8	PASS
"<" means "less than" ; "mg/L" means "milligram per litre";				

Chemical Oxygen Demand (COD):

Standard Method for Analysis/Testing: ISO 6060e ISO 15705, USEPA 410.4, SM 5220-D

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	5	134	Foundational 150 Progressive 80 Aspirational 40	PASS
"<" means "less than" ; "mg/L" means "milligram per litre";				

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Dissolved Oxygen (DO):

Standard Method for Analysis/Testing: ISO 5814, EPA 360.1, SM 4500-O-G

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	1	6.07	/	DATA
"<" means "less than" ; "mg/L" means "milligram per litre"				

Oil & Grease:

Standard Method for Analysis/Testing: ISO 9377-2, SM 5520-B/C, USEPA 1664 revision B

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.5	<0.5	Foundational 10.0 Progressive 2.0 Aspirational 0.5	PASS
"<" means "less than" ; "mg/L" means "milligram per litre;"				

Total Phenols / Phenol Index:

Standard Method for Analysis/Testing: ISO 6439, SM 5530-B/C

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.001	<0.001	Foundational 0.5 Progressive 0.01 Aspirational 0.001	PASS
"<" means "less than" ; "mg/L" means "milligram per litre;"				

Total Chlorine:

Standard Method for Analysis/Testing: DPD Colorimetric Method with reference ISO 7393-2/EPA 330.5/SM4500-CI G

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.1	<0.1	/	DATA
"<" means "less than" ; "mg/L" means "milligram per litre;"				

Total Dissolved Solids (TDS):

Standard Method for Analysis/Testing: SM 2540-C, USEPA 160.1

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	5	584	/	DATA
"<" means "less than" ; "mg/L" means "milligram per litre;"				

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Total Nitrogen:

Standard Method for Analysis/Testing: ISO 11905 - Part 1 ISO 29441, USEPA 351.2 ,SM 4500P-J SM 4500N-B SM 4500N-C

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	5	<5	Foundational 20 Progressive 10 Aspirational 5	PASS

"<" means "less than" ; "mg/L" means "milligram per litre";

Total Phosphorus:

Standard Method for Analysis/Testing: ISO 17294 ISO 11885 ISO 6878, USEPA 365.4 SM 4500P-J USEPA 200.7 USEPA 200.8 USEPA 6010C USEPA 6020A

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.1	<0.1	Foundational 3.0 Progressive 0.5 Aspirational 0.1	PASS

"<" means "less than" ; "mg/L" means "milligram per litre";

Total Suspended Solids (TSS):

Standard Method for Analysis/Testing: ISO 11923, USEPA 160.2, SM 2540D

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	5	19	Foundational 50 Progressive 15 Aspirational 5	PASS

"<" means "less than" ; "mg/L" means "milligram per litre";

Chloride:

Standard Method for Analysis/Testing: ISO 10304-1 ISO 15923-1, SM 4110-B SM 4110-C SM 4500-CI D or E USEPA 300

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	10	<10	/	DATA

"<" means "less than" ; "mg/L" means "milligram per litre";

Cyanide, total:

Standard Method for Analysis/Testing: ISO 6703-1,-2,-3, ISO 14403-1,-2, USEPA 335.2, APHA 4500-CN

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.05	<0.05	Foundational 0.2 Progressive 0.1 Aspirational 0.05	PASS

"<" means "less than" ; "mg/L" means "milligram per litre";

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Sulfate:

Standard Method for Analysis/Testing: ISO 10304-1 ISO 15923-1, SM 4500 SO₄, E, F, G SM 4100 B, C USEPA 300 USEPA 9038

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	10	<10	/	DATA

"<" means "less than" ; "mg/L" means "milligram per litre;

Sulfide:

Standard Method for Analysis/Testing: ISO 10530, SM 4500-S₂-D, E,G, or I

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.01	<0.01	Foundational 0.5 Progressive 0.05 Aspirational 0.01	PASS

"<" means "less than" ; "mg/L" means "milligram per litre;

Sulfite:

Standard Method for Analysis/Testing: ISO 10304-3, SM 4500-SO₃2-C

Sample ID	Detection limit, mg/L	Result, mg/L	Limit, mg/L	Conclusion
001	0.2	1.0	Foundational 2.0 Progressive 0.5 Aspirational 0.2	PASS

"<" means "less than" ; "mg/L" means "milligram per litre;

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(4A) Sludge Disposal Pathways Parameters:

Total Metals:

Standard Method for Analysis/Testing: Preparation: Acid digestion followed by ICP analysis with reference to US EPA 3050, US EPA 6010 D, US EPA 6020 B, US EPA 3060a, US EPA 7196, US EPA 7471 b, US EPA 3051a, US EPA 6020b, USEPA 200.7, USEPA 200.8, USEPA 218.6 USEPA 6010c, USEPA 6020a,Acid Digestion with ICP analysis or For Cr VI, with reference to Colorimetric UV/VIS (EPA 7196) followed by UV analysis.

Table with 6 columns: Substance name, CAS No., Detection limit, mg/kg, Result, mg/kg (003), Reporting limit, mg/kg, Conclusion. Rows include Total Antimony (Sb), Total Arsenic (As), Total Barium (Ba), Total Cadmium (Cd), Total Cobalt (Co), Total Copper (Cu), Total Lead (Pb), Total Nickel (Ni), Total Selenium (Se), Total Silver (Ag), Total Chromium (Cr), Total Zinc (Zn), # Hexavalent Chromium (Cr-VI), Total Mercury (Hg). Conclusion is PASS.

"<" means "less than" ; "ND" means "Not detected" ; "mg/kg" means "milligram per kilogram"

Hexavalent Chromium (Cr-VI) is reported as Total Chromium Content. Hexavalent Chromium (Cr-VI) value will not exceed Total Chromium Content.

Cyanide:

Standard Method for Analysis/Testing: Preparation: CN converted to HCN by reflux-distillation to NaOH Analysis: Colourimetry (EPA 9014), or ISE (EPA 9213), Preparation: USEPA 9013 Analysis: HJ745, EPA 9014 or EPA 9213

Table with 5 columns: Sample ID, Detection limit, mg/kg, Result, mg/kg, Limit, mg/kg, Conclusion. Row 1: 003, 1, <1, 20, PASS.

"<" means "less than" "mg/kg" means "milligram per kilogram"

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pH Value:

Standard Method for Analysis/Testing: Preparation & Analysis: Suspension with Water & ISE/ EPA SW 9045D or HJ962

Sample ID	Result	Limit	Conclusion
003	7.4	/	DATA

% Solids (Dry Mass):

Standard Method for Analysis/Testing: Dry at 105°C/ EPA 160.3, HJ613 at 105°C

Sample ID	Result (%)	Limit, (%)	Conclusion
003	42.2	/	DATA

Paint Filter Test:

Standard Method for Analysis/Testing: EPA SW-846 or EPA 9095B

Sample ID	Result	Limit	Conclusion
003	Absent	/	DATA

Fecal Coliform

Standard Method for Analysis/Testing: Blended suspension, Multiple Tube Fermentation/ EPA 1681

Sample ID	Result (MPN/g)	Limit (MPN/g)	Conclusion
003	0	/	DATA

“<” means “less than” “MPN/g” means “Most Probable Number per gram”

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Alkyphenol (AP) & Alkyphenol ethoxylates (APEOs)

Standard Method for Analysis/Testing: Modified dichloromethane extraction with mechanical agitation, soxhlet, or ultrasonic, NP/OP, GC-MS, LC-MS, OPEO/NPEO (n>2): GC-MS; LC-MS, OPEO/NPEO (n=1,2), GC-MS, LC-MS/ NP/ OP ISO 18857-2; ASTM D7065 OPEO/NPEO n>2 ISO 18254-1 OPEO/NPEO n=1,2 ISO 18857-2; ASTM D7065

Detection Limit: 0.4 mg/kg

Substance name	CAS No.	Reporting limit, mg/kg	Result, mg/kg (003)
Nonylphenol ethoxylates (NPEO)	9016-45-9, 26027-38-3 37205-87-1, 68412-54-4 127087-87-0	0.4	ND
Nonylphenol (NP), mixed isomers	104-40-5, 11066-49-2 25154-52-3, 84852-15-3	0.4	ND
Octylphenol ethoxylates (OPEO)	9002-93-1, 9036-19-5 68987-90-6	0.4	ND
Octylphenol (OP), mixed isomers	140-66-9, 1806-26-4 27193-28-8	0.4	ND
Conclusion			PASS
“<” means “less than”; “ND” means “Not detected”; “mg/kg” means “milligram per kilogram”			

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Polycyclic Aromatic Hydrocarbons (PAHs)

Standard Method for Analysis/Testing: Preparation: Dichloromethane extraction with mechanical agitation, soxhlet, or ultrasonic ,Clean up: GPC, Analysis: GC-MS/ Preparation: USEPA 3540/3541, soxhlet USEPA 3550, ultrasonic Clean up: USEPA 3650, Analysis: USEPA 827

Detection Limit: 0.2 mg/kg

Substance name	CAS No.	Reporting limit, mg/kg	Result, mg/kg (003)
Benzo[a]pyrene (BaP)	50-32-8	0.2	ND
Anthracene	120-12-7	0.2	ND
Pyrene	129-00-0	0.2	ND
Benzo[ghi]perylene	191-24-2	0.2	ND
Benzo[e]pyrene	192-97-2	0.2	ND
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	ND
Benzo[j]fluoranthene	205-82-3	0.2	ND
Benzo[b]fluoranthene	205-99-2	0.2	ND
Fluoranthene	206-44-0	0.2	ND
Benzo[k]fluoranthene	207-08-9	0.2	ND
Acenaphthylene	208-96-8	0.2	ND
Chrysene	218-01-9	0.2	ND
Dibenz[a,h]anthracene	53-70-3	0.2	ND
Benzo[a]anthracene	56-55-3	0.2	ND
Acenaphthene	83-32-9	0.2	ND
Phenanthrene	85-01-8	0.2	ND
Fluorene	86-73-7	0.2	ND
Naphthalene	91-20-3	0.2	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “mg/kg” means “milligram per kilogram”			

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Chloro-Toluenes

Standard Method for Analysis/Testing: Preparation: Dichloromethane extraction with mechanical agitation, soxhlet, or ultrasonic, Clean up: GPC, Analysis: GC-MS/ Preparation: USEPA 3540/3541, soxhlet USEPA 3550, ultrasonic Clean up: USEPA 3650, Analysis: USEPA 827

Detection Limit: 0.2 mg/kg

Substance name	CAS No.	Reporting limit, mg/kg	Result, mg/kg (003)
Monochlorobenzene	108-90-7	0.2	ND
1,2-Dichlorobenzene	95-50-1	0.2	ND
1,3-Dichlorobenzene	541-73-1	0.2	ND
1,4-Dichlorobenzene	106-46-7	0.2	ND
1,2,3-Trichlorobenzene	87-61-6	0.2	ND
1,2,4-Trichlorobenzene	120-82-1	0.2	ND
1,3,5-Trichlorobenzene	108-70-3	0.2	ND
1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	ND
1,2,3,5-Tetrachlorobenzene	634-90-2	0.2	ND
1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	ND
Pentachlorobenzene	608-93-5	0.2	ND
Hexachlorobenzene	118-74-1	0.2	ND
2-chlorotoluene	95-49-8	0.2	ND
3-chlorotoluene	108-41-8	0.2	ND
4-chlorotoluene	106-43-4	0.2	ND
2,3-dichlorotoluene	32768-54-0	0.2	ND
2,4-dichlorotoluene	95-73-8	0.2	ND
2,5-dichlorotoluene	19398-61-9	0.2	ND
2,6-dichlorotoluene	118-69-4	0.2	ND
3,4-dichlorotoluene	95-75-0	0.2	ND
3,5-dichlorotoluene	25186-47-4	0.2	ND
2,3,4-dichlorotoluene	7359-72-0	0.2	ND
2,3,6-trichlorotoluene	2077-46-5	0.2	ND
2,4,5-trichlorotoluene	6639-30-1	0.2	ND
2,4,6-trichlorotoluene	23749-65-7	0.2	ND
3,4,5-trichlorotoluene	21472-86-6	0.2	ND
2,3,4,5- tetra chlorotoluene	76057-12-0	0.2	ND
2,3,5,6- tetra chlorotoluene	29733-70-8	0.2	ND
2,3,4,6- tetra chlorotoluene	875-40-1	0.2	ND
Pentachlorotoluene	877-11-2	0.2	ND
Conclusion			PASS
“<” means “less than” ; “ND” means “Not detected” ; “mg/kg” means “milligram per kilogram”			

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TEST REPORT NO: 1001889431

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Wastewater After Treatment



Sample Photo(s):

Wastewater After Treatment- Water at discharge point



GPS for this point (if available); Latitude: 23.9042616666667⁰, Longitude: 90.0521233333333⁰

Sampling Point Photo(s):

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Wastewater Before Treatment



Sample Photo(s):

Wastewater Before Treatment



GPS for this point (if available); Latitude: 23.90426°, Longitude: 90.0518500000002°

Sampling Point Photo(s):

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Sludge



Sample Photo(s):

Sludge



GPS for this point (if available); Latitude: 23.90393833333333^o, Longitude: 90.05173833333335^o

Sampling Point Photo(s):

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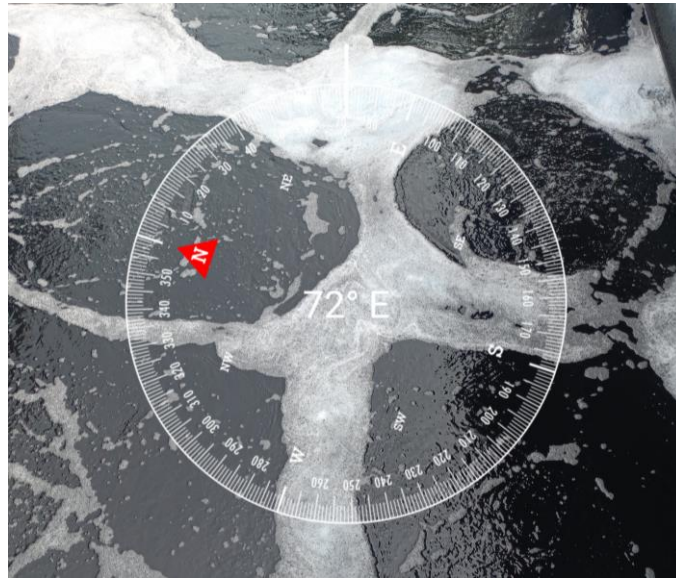
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Foam Picture at 10.15am, 29 Mar. 2023

GPS for this point (if available); Latitude: 23.9017805^o, Longitude: 90.0447593^o



Receiving Water

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Field Testing Instruments

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1001889431

UL Wastewater Test Request Form

Contact Information: W: +88-01730087206, +88-01730087201, Email: ul@ul.com, ul.bd@ul.com
(P.O. Address: The Pearl Trade Centre | 5th, 14th & 15th Floor, Cha-90/3, Progoti Sharani, North Badda, Dhaka-1206, Bangladesh)

Required Service:			
<input checked="" type="checkbox"/> Regular Service (DET04 & ZSHC)	<input type="checkbox"/> Regular Service (selective test)	<input type="checkbox"/> Log in Date:	For SL office use only
<input type="checkbox"/> Express Service (selective test)	<input type="checkbox"/> Emergency Service (selective test)	<input type="checkbox"/> On-site Order No.:	14745206
<input type="checkbox"/> 4 Working Day** - 40% Surcharge	<input type="checkbox"/> 3 Day** - 100% Surcharge	<input type="checkbox"/> Report Due Date:	

Applicant & Report Sending Information		Email addresses to send Electronic Reports	
Subscriber's Name:	Kawucomen	Email 1:	ul@ul.com
Company Name:	Kawucomen Ltd	Email 2:	ul.bd@ul.com
Address:	Dhaka, North Badda, Bangladesh 1206	Email 3:	
Mobile Phone:	01919002191	Email 4:	

Sampling Location	Sample Description	Reference	Billing Information
<input type="checkbox"/> Incoming Water	<input type="checkbox"/> Discharge Water	<input type="checkbox"/> Buyer	<input type="checkbox"/> Manufacturer
<input type="checkbox"/> Waste Water	<input type="checkbox"/> Sludge	<input type="checkbox"/> Self Reference	<input type="checkbox"/> Buyer/Agent
<input type="checkbox"/> Drain	<input type="checkbox"/> Grab & Store		<input type="checkbox"/> Bill to person Name
<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Sample Color		

General Chemistry			
<input type="checkbox"/> Temperature	<input type="checkbox"/> Total Suspended Solids (TSS)	<input type="checkbox"/> Biological Oxygen Demand (BOD)	<input type="checkbox"/> Chemical Oxygen Demand (COD)
<input type="checkbox"/> pH Value	<input type="checkbox"/> Dissolved Oxygen (DO)	<input type="checkbox"/> Total Alkalinity (TA)	<input type="checkbox"/> Total Hardness (TH)
<input type="checkbox"/> Total Suspended Solids (TSS)	<input type="checkbox"/> Suspended Solids (SS)	<input type="checkbox"/> Chloride (CL)	<input type="checkbox"/> Sulfide (S)
<input type="checkbox"/> Biological Oxygen Demand (BOD)	<input type="checkbox"/> Chemical Oxygen Demand (COD)	<input type="checkbox"/> Total Alkalinity (TA)	<input type="checkbox"/> Total Hardness (TH)
<input type="checkbox"/> Total Alkalinity (TA)	<input type="checkbox"/> Total Hardness (TH)	<input type="checkbox"/> Cyanide	<input type="checkbox"/> Lead
<input type="checkbox"/> Total Hardness (TH)	<input type="checkbox"/> Total Chloride (CL)	<input type="checkbox"/> Mercury	<input type="checkbox"/> Nickel
<input type="checkbox"/> Total Chloride (CL)	<input type="checkbox"/> Total Sulfide (S)	<input type="checkbox"/> Zinc	<input type="checkbox"/> Copper
<input type="checkbox"/> Total Sulfide (S)	<input type="checkbox"/> Total Copper (Cu)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Chromium (Cr)
<input type="checkbox"/> Total Copper (Cu)	<input type="checkbox"/> Total Cadmium (Cd)	<input type="checkbox"/> Total Chromium (Cr)	<input type="checkbox"/> Total Nickel (Ni)
<input type="checkbox"/> Total Chromium (Cr)	<input type="checkbox"/> Total Nickel (Ni)	<input type="checkbox"/> Total Lead (Pb)	<input type="checkbox"/> Total Mercury (Hg)
<input type="checkbox"/> Total Nickel (Ni)	<input type="checkbox"/> Total Lead (Pb)	<input type="checkbox"/> Total Mercury (Hg)	<input type="checkbox"/> Total Cyanide (CN)
<input type="checkbox"/> Total Mercury (Hg)	<input type="checkbox"/> Total Cyanide (CN)	<input type="checkbox"/> Total Hexachlorocyclopentadiene (HxCPCD)	<input type="checkbox"/> Total Polychlorinated Biphenyls (PCBs)
<input type="checkbox"/> Total Hexachlorocyclopentadiene (HxCPCD)	<input type="checkbox"/> Total Polychlorinated Biphenyls (PCBs)	<input type="checkbox"/> Total Polycyclic Aromatic Hydrocarbons (PAHs)	<input type="checkbox"/> Total Organochlorine Compounds (OCs)
<input type="checkbox"/> Total Organochlorine Compounds (OCs)	<input type="checkbox"/> Total Organophosphate Compounds (OPCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)

ZSHC Parameter / BOD Standard / Sewerage / Sewerage			
<input type="checkbox"/> Temperature (°C)	<input type="checkbox"/> Color (Pt-Co Unit 20°C)	<input type="checkbox"/> Oil and Grease	<input type="checkbox"/> Phenol
<input type="checkbox"/> pH	<input type="checkbox"/> Ammonia Nitrogen (NH ₃ -N)	<input type="checkbox"/> Carbon Disulfide (CS ₂)	<input type="checkbox"/> Petroleum Fuel
<input type="checkbox"/> Total Suspended Solids (TSS)	<input type="checkbox"/> Total Phosphorus (TP)	<input type="checkbox"/> Cyanide	<input type="checkbox"/> Crystallinity
<input type="checkbox"/> Biological Oxygen Demand (BOD)	<input type="checkbox"/> Total Nitrogen (TN)	<input type="checkbox"/> Arsenic	<input type="checkbox"/> Cadmium
<input type="checkbox"/> Chemical Oxygen Demand (COD)	<input type="checkbox"/> Total Sulfur (TS)	<input type="checkbox"/> Chromium	<input type="checkbox"/> Lead
<input type="checkbox"/> Total Alkalinity (TA)	<input type="checkbox"/> Total Chloride (CL)	<input type="checkbox"/> Mercury	<input type="checkbox"/> Nickel
<input type="checkbox"/> Total Hardness (TH)	<input type="checkbox"/> Total Sulfide (S)	<input type="checkbox"/> Copper	<input type="checkbox"/> Zinc
<input type="checkbox"/> Total Chloride (CL)	<input type="checkbox"/> Total Copper (Cu)	<input type="checkbox"/> Cadmium	<input type="checkbox"/> Chromium
<input type="checkbox"/> Total Sulfide (S)	<input type="checkbox"/> Total Cadmium (Cd)	<input type="checkbox"/> Total Chromium (Cr)	<input type="checkbox"/> Total Nickel (Ni)
<input type="checkbox"/> Total Copper (Cu)	<input type="checkbox"/> Total Lead (Pb)	<input type="checkbox"/> Total Mercury (Hg)	<input type="checkbox"/> Total Cyanide (CN)
<input type="checkbox"/> Total Cadmium (Cd)	<input type="checkbox"/> Total Hexachlorocyclopentadiene (HxCPCD)	<input type="checkbox"/> Total Polychlorinated Biphenyls (PCBs)	<input type="checkbox"/> Total Polycyclic Aromatic Hydrocarbons (PAHs)
<input type="checkbox"/> Total Chromium (Cr)	<input type="checkbox"/> Total Organochlorine Compounds (OCs)	<input type="checkbox"/> Total Organophosphate Compounds (OPCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Nickel (Ni)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Lead (Pb)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Mercury (Hg)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Cyanide (CN)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Hexachlorocyclopentadiene (HxCPCD)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Polychlorinated Biphenyls (PCBs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Polycyclic Aromatic Hydrocarbons (PAHs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Organochlorine Compounds (OCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Organophosphate Compounds (OPCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)
<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)	<input type="checkbox"/> Total Organotin Compounds (OTCs)

Additional Instruction	
<input type="checkbox"/> Other Tests	<input type="checkbox"/> Other Tests
<input type="checkbox"/> Other Tests	<input type="checkbox"/> Other Tests
<input type="checkbox"/> Other Tests	<input type="checkbox"/> Other Tests

Name and position of factory representative
(Name, Designation, Signature)

Signature

WASTEWATER TEST REPORTING UNIT (UL VS BANGLADESH LTD)

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Solutions

UL VS Bangladesh Ltd.

ONSITE ZERO DISCHARGE SAMPLING DATA SHEET

Primary Data

Laboratory Sample Number	
Client Name	Taranna Spandex Ltd.
Client Contact Person	Komolnayan / 0218821767
Facility Name and Address	Taranna Spandex Ltd. (Daka, Baita, Sataria, Manikganj) 8823
Name & DHC ID of Sampler	Md. Shabane Alam (C174008807971) on behalf of UL VS Bangladesh Ltd
Date of Collection	28-Mar-23
Sampling Location	Discharge water after Treatment Wastewater at discharge point
Sampling Identification	DHC Wastewater and Sludge Laboratory Sampling and Analysis Plan (SAP) Version 2.1
Sample Type	Composite Sampling
Discharge Mode	Direct discharge to environment - Local Canal
Factory Type	Printing/Pressing/Finishing/Textiles/Other (Please specify)

Field Data for Wastewater

Field with effluent treatment plant (Y/N)	Y	Discharge Time	10:00 AM	Departure Time	1:00 PM		
Sample Matrix (Y/N)	X	Wastewater After Treatment - Wastewater at discharge point					
Field Parameters		1	2	3	4	5	6
Recording Time		12:00 PM					
pH		7.5					
Temperature (Inlet) (°C)		27.5					
Temperature (Discharge Pipe) (°C)		27.5					
Temperature (Receiving Water) (°C)		27.5					
Standard Oxygen (DO)		6.5					
Total Suspended Solids (TSS)		10					
Flow Rate (l/min)							
Flow Rate (l/hour)							
Retention time of the equalization tank, hours							
Color							
Residual Free Chlorine / Free Chlorine (Specify)							
Number of sample containers		1 (1.5L)	1 (1L)	4 (0.25L)	1 (0.5L)		
Volume Collected, L		1.5	1	1	0.5		
Total Volume Collected, L							

Wastewater Sample Containers and Preservatives

Test Name (Conventional Parameters & MW)	Required Test (X)	Required Sample Volume (mL)	Sample Container Pre-treatment Process & Preservation
Biochemical Oxygen Demand (BOD)	X		
Chloride, Coliform, Conductivity, TDS, TSS, Sulfate	X		
AP and APFDs including all isomers			
Acid Mine Drainage & Sulfides			
Chlorinated Paraffins			
Cyanides and Chlorocyanides			
Cyanohydrins			
Dimethyl Formamide (DMF)			
Dyes - Carcinogenic or Equivalent Concern			
Dyes - Disperse (Azo-dyes)			
Dyes - Navy Blue Colorant			
Flame Retardants			
Phenols - Direct Esters			
Organic Compounds			
Other Miscellaneous Chemicals			
Phthalates - including all other esters of ortho-phthalic acid			
Polycyclic Aromatic Hydrocarbons (PAHs)			
Restricted Aromatic Amines (Classified from Azo colorants)			
UV Absorbers			
Perfluorinated and Polyfluorinated Chemicals (PFCS)			
Halogenated Solvents			
Volatile Organic Compounds (VOC)			
Heavy Metals (All metals except Cr-VI)	X	150	1. Amber glass rinsed with Nitric acid, Pre-add 0.5ml of 2M NaOH, 400L + pH 2, keep cool between 2°C to 8°C
Cd (P)	X	150	1. PE, Washes with peroxide grade Acetone, 8.4g/l HCl in 10ml, add buffer to pH 9.0-9.5, keep cool between 2°C to 8°C
Cobalt	X	150	1. PE, Washes with peroxide grade Acetone, NaOH = 21 pH, add 0.1 ml of 10% Sodium Thiosulfate, keep cool between 2°C to 8°C
Chemical Oxygen Demand (COD)	X		
Phenols	X		
Total Nitrogen	X		
Oil & Grease	X		
Ammonia-Nitrogen	X		
Total Phosphorus	X		
Substituted organically bound halogens (AOH)	X	250	1. Amber glass rinsed with Nitric acid, Pre-add 0.5ml of 2M NaOH, 400L + pH 1, keep cool between 2°C to 8°C
Sulfide	X	250	1. PE, Washes with peroxide grade Acetone, 2.5 ml 2.5% EDTA, keep cool
Sulfate	X	250	1. PE, Washes with peroxide grade Acetone, 10.4 ml 1N HCl Acetate, NaOH = pH 9, keep cool between 2°C to 8°C
Zinc	X	500	1. PE, clean, metal, non reactive, 0.1 ml of 10% Sodium Thiosulfate, keep cool between 2°C to 8°C

Remarks

= The minimum sampling time for DHC guidelines is 8 hours with no more than 1 hour between in-stream samples.

= If the retention time of the equalization tank is 11 hours or more than un-aerated & effluent samples can be collected once and that sample is considered a composite.

Recorded by:  Md. Shabane Alam (C174008807971) Date: 28-Mar-23

Factory Representative Signature:  Full Name: Komolnayan Date: 28-Mar-23

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TEST REPORT NO: 1001889431

Apr.6,2023

UL ORDER NO: 14745206

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UL VS Bangladesh Ltd.
ONSITE ZERO DISCHARGE SAMPLING DATA SHEET

Primary Data
Laboratory Sample Number
Client Name: Tazanna Apparel Ltd
Field Contact Person: Nazmusseman / 91179681917
Facility Name and Address: Tazanna Apparel Ltd Goley, Jamir, Suteria, Manikganj, 1820
Name & ZONE ID of Sample: Md. Shabees Alam (17431961717) on behalf of UL VS Bangladesh Ltd
Date of Collection: 29-Mar-23
Sampling Location: Sludge Sampling Point
Sampling Identification: (This) Wastewater and Sludge Laboratory Sampling and Analysis Plan (SAP) Version 2.1
Sample Type: Composite Sampling
Discharge Mode: Direct discharge to environment - Local Canal
Factory Type: Dyeing/Printing/Washing/Finishing/Treatment/Others (Please specify)

ZDHC Defined Seven Sludge Disposal Pathways
Put a mark against factory has been using current sludge disposal pathway with sludge reference documents
ZDHC Disposal Pathway A - Offsite Incineration at >1800°C
ZDHC Disposal Pathway B - Landfill with Significant Control Measures
ZDHC Disposal Pathway C - Building Products Production at >2000°C
ZDHC Disposal Pathway D - Landfill with Limited Control Measures
ZDHC Disposal Pathway E - Offsite Incineration and Building Products Production at <1200°C
ZDHC Disposal Pathway F - Landfills with No Control Measures
ZDHC Disposal Pathway G - Land Application

Wastewater Sample Containers and Preservatives
Table with columns: Tests Name (Conventional Parameters & MS14), Required Test (S), Required Sample Volume (litre), Sample Container Pre-treatment Process & Preservation

Remarks
For solid sludge samples (cake, powder, ash), adding a chemical preservative is generally not useful since the preservative does not usually penetrate the sludge matrix.
Preservation is achieved by keeping the temperature between 2°C and 8°C.
When collecting samples, fill the container to 4/5 full to enable expansion of samples and provide room for gases that may be produced.
The maximum sampling time for ZDHC guideline is 6 hours with no more than 1 hour between discharge and sampling.
Recorded by: Signature: Md. Shabees Alam (17431961717) Date: 29-Mar-23
Factory Representative Signature: Signature: Full Name: Date: 29-Mar-23

**** End of Report ****

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UL VS Terms and Conditions

All services are governed by the following Terms and Conditions.

- 1. Verification Services.** The UL Contracting Party ("we", "us", or "our" as the context requires) will perform commercial testing, verification, audit, assessment, inspection, and/or other services ("Services") in accordance with your instructions as described in this order, scope of work, project proposal, quotation, or order acknowledgment ("Quotation"). The Services will be limited to an assessment of your samples' conformity to requirements, specifications, and/or protocols you have established ("Your Requirements"), and do not express any opinion regarding the bulk from which the samples were drawn. The Services do not involve any assessment or evaluation to independent safety standards, and we and our affiliates have no responsibility to make any independent safety assessment of any samples.
- 2. Retailer Programs.** If you request us to test compliance with retailer, carrier or other third party program ("Retailer") by requesting Services under the Retailer's program, you consent to our disclosure of all associated information, materials, and deliverables to such Retailer and acknowledge that, notwithstanding any terms to the contrary in these Service Terms, the ownership of the deliverables for the Services will be in accordance with the Retailer's program.
- 3. Payment Terms.** You will pay, without set off, our fees and related expenses in accordance with the Quotation including the cost of all taxes, wire or transfer fees, duties, and other fiscal charges which become due on the quoted price and will indemnify us from and against liabilities, incurred as a result of failure to pay any such sums when they become due. We may charge interest at 1% per month (12% per year), or the maximum legal rate if less than 1.0% per month, from the due date until paid fully. You agree to pay reasonable collection costs, including attorneys' fees, if necessary, in the event of late or non-payment.
- 4. Your Requirements.** You are responsible for establishing or selecting all Your Requirements that we will use in performing the Services. We may provide you with assistance in developing Your Requirements that meet your needs, however, in all cases you must review and approve Your Requirements to be used in performing the Services.
- 5. Estimated Schedule and Price.** Any time schedule and pricing terms set forth in this Quotation are estimates only and subject to change upon reasonable notice from us depending upon the specific project.
- 6. On-Site Investigations.** If we perform Services on site at your facilities, or at the facilities of other parties as directed by you; you will ensure that our representatives have safe, secure, and free access to the facilities. Our access will not be conditioned upon the execution of any agreement, waiver, or release. If our representatives are prevented from performing or completing any Services for any reason beyond our reasonable control, we will not be responsible for the nonperformance, and you may be charged for any actual expenses we incur and fees for Services performed.
- 7. Deliverables.** We will provide you with a report outlining: (i) your instructions and request for Services accepted by us, (ii) Your Requirements used in providing the Services, (iii) the Services performed, and (iv) the results of those Services. We are under no obligation to refer to or report on any facts or circumstances which are outside your specific instructions received and accepted by us.
- 8. Our Findings.** We do not guarantee that our opinions or findings will be recognized or accepted by third parties.
- 9. Use of Names and Marks.** Except as otherwise authorized by us in writing, you will not use our name, abbreviation, symbols, marks, or the name of any of our subsidiaries, affiliates, or parent on any goods or their containers or packaging, or in connection with any advertising, promotions, or otherwise.
- 10. Cancellation Fees.** If you cancel or change a Quotation: (i) for an inspection after 3:00 PM of the working day before the scheduled inspection date, we will charge you the Quotation price plus any travel costs incurred before the cancellation; (ii) for testing after we receive the sample(s) at the testing facility, we will charge you cancellation fees according to the amount of actual work performed with a minimum cancellation fee of \$100 USD; or (iii) for a scheduled audit date, you will be responsible for all incurred non-refundable travel costs associate with that audit. Any change or cancellation of an audit that occurs within 7 days of the scheduled audit will be charged a \$600 USD fee in addition to any incurred travel costs.
- 11. No Warranty.** NO REPRESENTATION, WARRANTY, OR GUARANTEE, EXPRESS OR IMPLIED, IS INCLUDED IN THESE TERMS AND CONDITIONS, OR IN ANY QUOTATION, REPORT, OR OTHER DOCUMENT PROVIDED UNDER THESE TERMS AND CONDITIONS INCLUDING, BUT NOT LIMITED TO: (i) ANY "IMPLIED WARRANTY OF MERCHANTABILITY" OR "FITNESS FOR A PARTICULAR PURPOSE", (ii) NON-INFRINGEMENT, AND (iii) THAT THE WEB SERVICES (AS DEFINED BELOW) WILL BE UNINTERRUPTED, TIMELY, SECURE, OR ERROR-FREE.
- 12. Your Information.** You represent and warrant that all information and data provided to us by you, or on your behalf, is complete and accurate and may be relied upon to provide Services. In addition, you represent and warrant that all of Your Information is owned or licensed by you, and does not infringe on the intellectual property rights of any third party. If any information or data provided to us by you or on your behalf is either incomplete or inaccurate, we will not be liable in any manner for any deficiencies in the Services.
- 13. Ownership of Work Product.** You will own the test reports or other materials provided to you pursuant to any Quotation. We may retain a copy of the test reports and other materials for our archives and for creating reports for you and third parties, as required by you.
- 14. Web Services.** We may provide you with certain website tools and related services, including the ability to order services online through a website (collectively, the "Web Services"). The Web Services are provided to you as a convenience and are provided on an "as is, as available" basis. By using the Web Services, you acknowledge and agree that no data or content transmitted over our networks, the Internet, or wirelessly, or through or in connection with the Web Services, is guaranteed to be secure or free from unauthorized intrusion, and that data stored by us, our affiliates, or our service providers may be deleted, modified, or damaged. You acknowledge that if you wish to protect your transmission of data or files to us, it is your responsibility to use a secure encrypted connection to communicate with and use the Web Services. Your use of the Web Services is at your sole risk and is subject to any terms of use applicable to such Web Services. Web Services are included in the definition of Services above.
- 15. Confidentiality.** We will not disclose your information obtained in confidence ("Confidential Information") to third parties, except our subsidiaries, affiliates, or subcontractors, without your prior written authorization. Confidential Information will not include information: (a) already known to us, (b) publicly available, (c) subsequently acquired by us from other sources without a breach of these Terms and Conditions, (d) disclosure that is necessary to perform the Services, (e) required to be produced by law or government order, or accreditation authority, or (f) related to a product bearing a UL Mark that should be disclosed to us or our affiliates pursuant to another agreement with you.
- 16. Samples.** If we require sample examination, you will ship samples to us at your expense. Upon completion of testing, the samples will be destroyed, unless other arrangements are made for return of the samples at your expense. You acknowledge that testing and sample preparation may damage or destroy the sample(s), for which we will not be liable.
- 17. LIMITATION OF LIABILITY.** OUR LIABILITY FOR ANY CLAIMS FOR LOSS, DAMAGE, OR EXPENSE OF ANY NATURE AND HOWSOEVER ARISING FOR ANY BREACH OF CONTRACT AND/OR ANY FAILURE TO EXERCISE APPROPRIATE SKILL AND CARE BY US WILL UNDER NO CIRCUMSTANCE EXCEED THE FEES RECEIVED FOR THE SPECIFIC SERVICES WHICH GIVE RISE TO SUCH CLAIMS. UNDER NO CIRCUMSTANCE WILL WE HAVE ANY LIABILITY FOR ANY CLAIMS FOR INDIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES OF ANY NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO: LOSS OF PROFITS, GOODWILL, USE, DATA, FUTURE BUSINESS, OR PRODUCTION; CANCELLATION OF CONTRACTS ENTERED INTO BY YOU; OR OTHER INTANGIBLE LOSSES (EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES). UNDER NO CIRCUMSTANCE WILL WE BE LIABLE TO YOU FOR ANY CLAIMS FOR LOSS, DAMAGE, OR EXPENSE UNLESS SUCH CLAIM IS BROUGHT UNDER SECTION 24 (DISPUTES) WITHIN TWELVE MONTHS AFTER THE DATE OF THE PERFORMANCE BY US OF THE SERVICES WHICH GIVE RISE TO THE CLAIM OR, IN THE EVENT OF ANY ALLEGED NON-PERFORMANCE, WITHIN TWELVE MONTHS OF THE DATE WHEN SUCH SERVICES SHOULD HAVE BEEN COMPLETED.
- 18. Indemnification.** You will defend, hold harmless, and indemnify us and our officers, directors, trustees, employees, agents, or subcontractors against all claims made by any third party for loss, damage, or expense arising out of these Terms and Conditions, including without limitation, the performance or non-performance of any Services or the Web Services.
- 19. Waiver.** Any failure by a party to insist upon the performance of any section of these Terms and Conditions will not constitute a waiver of any rights under these Terms and Conditions or future performance of that section.
- 20. No Third Party Beneficiaries.** The parties intend that no provisions of these Terms and Conditions will in any way bind or benefit any third party or the public at large and that no third party will have any rights or cause of action under these Terms and Conditions. In particular, in the event Singapore law governs these Terms and Conditions pursuant to Section 23 (Governing Law), a person or entity who is not a party to these Terms and Conditions will have no right under the Contracts (Rights of Third Parties) Act (Chapter 53B) to enforce any term of these Terms and Conditions, regardless of whether such person or entity has been identified by name, as a member of a class, or as answering a particular description.
- 21. No Assignment.** Neither party may assign any of its rights or obligations under these Terms and Conditions to any other person without the other party's written authorization. However, we may, upon written notice, assign our rights and obligations under these Terms and Conditions to any of our affiliates or subsidiaries.
- 22. Subcontracting.** We may use subcontractors for certain testing or other Services. All subcontractors will meet our current qualification requirements and will comply with our requirements for confidentiality, conflicts of interest, and ethical standards.
- 23. Termination and Notice.** These Terms and Conditions will continue in effect until terminated by either party upon thirty days written notice or, in the event of your breach of these Terms and Conditions, immediately upon receipt of written notice to you. You will pay those fees and expenses incurred by us prior to termination. Notice to either party may be made by hand delivery, courier service, mail, facsimile, or e-mail transmission at the receiving party's designated principal place of business. Notice to us must be sent both to: UL Verification Services Pte. Ltd, Attn: President, 1 Maritime Square, Harbour Front Centre, #11-03, Singapore 099253 with a copy to UL LLC, Attn.: General Counsel at 333 Pingsten Road, Northbrook, Illinois 60062. Notice will be effective upon receipt.
- 24. Governing Law:** These Terms and Conditions will be governed and interpreted by the laws of the State of Illinois, United States of America, except if: (i) UL Contracting Party's principal place of business is Asia, Australia, or New Zealand, then Singapore law, and (ii) UL Contracting Party's principal place of business is Europe, then Swiss law, without reference to the applicable jurisdiction's choice of law principles.
- 25. Disputes.** Any dispute or disagreement, other than nonpayment of fees, relating to these Terms and Conditions or the Services, will be settled by confidential, binding arbitration administered by the International Centre for Dispute Resolution of the American Arbitration Association ("AAA") pursuant to the AAA Commercial Arbitration Rules and the Procedures for Large, Complex Commercial Disputes. The arbitration venue will be Chicago, Illinois, except if: (i) UL Contracting Party's principal place of business is in Europe, the venue will be Geneva, Switzerland, and (ii) UL Contracting Party's principal place of business is in Asia, Australia, or New Zealand, the venue will be Singapore, Republic of Singapore. The arbitration will be conducted before a panel of three (3) arbitrators. The arbitration panel will be selected as follows: the parties will request a list of ten (10) arbitrators drawn from the AAA's panel of commercial arbitrators (who are experienced in and familiar with the AAA's Procedures for Large, Complex Commercial Disputes). From this list, both parties will each choose one arbitrator. After they have been notified of their panel selection, the two (2) arbitrators will agree on a third arbitrator from the list of ten (10), who will be the chair of the panel, and the panel will be final. The decision of the majority of the arbitrators will be the panel's decision. The arbitrators will not have the authority to add, change, or disregard any term of these Terms and Conditions to award incidental, consequential, or punitive damages (including, but not limited to, loss of use, unjust enrichment, and/or lost profits), or exceed the remedies provided by the limitation of liability of these Terms and Conditions. The panel's decision will be binding and judgment on the arbitration award may be entered by a court of competent jurisdiction. Arbitration will be the final remedy for any dispute between the parties arising out of these Terms and Conditions, provided, however, that nothing herein will prevent either party from seeking a court order for injunctive relief (in addition to other remedies) to stop or prevent misuse or misappropriation of its marks, confidential or proprietary information, or infringement of its intellectual property, in a court of law. All arbitrations will be conducted in English.
- 26. Severability.** If any section of these Terms and Conditions is held invalid, void, or unenforceable for any reason that section will be severed, and all other sections of these Terms and Conditions will remain valid to the extent permissible under law.
- 27. Modifications.** These Terms and Conditions are the entire and complete agreement between the parties and supersede any other communications, representations, or agreements with respect to its subject matter. Under no circumstances will any preprinted, additional, or different terms and conditions on your requests for quotation, purchase orders, invoices, sales or marketing materials, emails, any acceptance communications, or other business documents apply to any Services or Quotation or bind us in any manner. Modifications that have not been made by us or that have not been accepted by us in a written or emailed confirmation from us are not accepted by us, and commencement of performance will not signify acceptance by us of any such modifications. Any such modifications are excluded from our agreement, and such modifications will not be a binding agreement on us.
- 28. Order of Precedence.** Except for conflicts with Section 2 (Payment Terms), Section 4 (Estimated Schedule and Price) and Section 9 (Cancellation Fees), these Terms and Conditions will take precedence over any conflicting terms in any Quotation.
- 29. Electronic Signature.** These Terms and Conditions may be executed and delivered by facsimile, PDF, or by means of other electronic signature. Our electronic, digital, or hard copies of these Terms and Conditions, your acceptance, and Quotations as signed, or otherwise accepted, by you will be the true, complete, valid, authentic, and enforceable copies of these documents. You agree that you will not contest the admissibility or enforceability of our copies in a court or any proceeding arising out of such documents.
- 30. Force Majeure.** Neither party will be liable for any failure or delay in the performance of its obligations due to fire, flood, earthquake, elements of nature, or acts of God, acts of war, terrorism, riots, civil disorder, rebellions, or other similar cause beyond the reasonable control of the party affected, provided such default or delay: (i) could not have been prevented by reasonable precautions; (ii) cannot reasonably be circumvented; (iii) and the party hindered or delayed immediately notifies the other party describing the circumstance causing delay.