

TEST REPORT

CLIENT DETAILS

Client Name: Kassim Textiles (Pvt) Ltd
Client Contact: Ahmer Kamran
Telephone: +92 213 500 1601-07
Email: compliance@kassimdenim.com
Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

LABORATORY DETAILS

SGS Affiliate: SGS Pakistan (Private) Limited, I & E
SGS Contact: Aamir Aziz
Telephone: +92 213 512 1388 – 97 Ext.: 342
Email: aamir.aziz@sgs.com
Address: H-3/3, Sector 5, Korangi Industrial Area, Karachi - Pakistan

FACTORY DETAILS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Contact: Ahmer. Kamran
Telephone: +92 213 500 1601-07
Email: compliance@kassimdenim.com
Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.
Types of Mills: (1) Spinning (2) Yarn Dyeing, Bleaching (3) Fabric Dyeing, Finishing, Washing
Discharge Destination: To the Environment
Name of Municipal/Centralized ETP: -
Address of Municipal/Centralized ETP: -

SAMPLE AND TESTING DETAILS

Sampling Country: SGS Pakistan (Private) Limited - I & E
Sampling Engineer: Hamza
Sampling Date: 30-03-2021
Sample Received Date: 30-03-2021
Test Performing Period: 30-03-2021 - 13-04-2021
No. of Samples: Water (3)
Sample Descriptions:
1) Incoming water (Grab)
2) Raw Wastewater (6-hour Composite)
3) Discharged Wastewater (6-hour Composite)
Sample Volume: 18 L. each water sample; 1000g sludge in total
Testing Institute: SGS Pakistan (Private) Limited, Chemical & Environmental Laboratory
Discharge Method: Direct Discharge

OVERALL RESULTS

	Incoming Water	Raw Waste Water	Discharged Waste Water
Conventional Parameters / Anion / Metals:	Fulfill Aspirational Limit	Fulfill Progressive Limit	Fulfill Foundational Limit
MRS� Parameters:	Not Tested	Not Detected	Not Detected

REMARKS

1. This test document cannot be reproduced in any way, except in full content, without prior approval in writing by the laboratory.
2. The results shown in this test report refer only to the sampling and the sample(s) tested unless otherwise stated.
3. For indirect discharge, factory performance against ZDHC requirements for conventional parameters, anions and metals for Discharged Waste Water are for reference only. Actual factory performance on Discharged Waste Water should be compared with the discharged license of the factory.

Signed for and on behalf of
SGS Pakistan (Private) Limited



Aamir Aziz
Assistant Manager - Industries & Environment

RESULT SUMMARY

Factory Name: Kassim Textiles (Pvt) Ltd
 Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

TEST ITEMS	Incoming Water	Raw Waste Water	Discharged Waste Water
Conventional Parameters	-	-	Please refer to the information in TEST RESULTS
Anions	-	-	O
Metals	O	X	O
Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs)	N/A	O	O
Chlorobenzenes and Chlorotoluenes (COCs)	N/A	O	O
Chlorophenols	N/A	O	O
Azo dyes	N/A	O	O
Carcinogenic dyes	N/A	O	O
Disperse dyes	N/A	O	O
Flame retardants	N/A	O	O
Glycols	N/A	O	O
Halogenated solvents	N/A	O	O
Organotin Compounds	N/A	O	O
Perfluorinated / Polyfluorinated Chemicals (PFCs)	N/A	O	O
Phthalates	N/A	O	O
Polycyclic Aromatic Hydrocarbons (PAHs)	N/A	O	O
Volatile Organic Compounds (VOCs)	N/A	O	O

Note:

X - Detected

O - Not Detected

N/A - Not Tested

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
	Date of Sampling			30-03-2021	30-03-2021	30-03-2021				
	Sampling Location			Incoming Water	ETP Inlet	ETP Outlet				
	Sampling Start Time			10:30	11:45	11:00				
	Sampling End Time			10:30	17:45	17:00				
	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Sample Colour Description	-	-	Colourless	Dark Blue	Reddish	-	-	-	-	
Average Waste Water Flow	-	-	L/hr	-	-	**80000	-	-	-	
Conventional Parameters										
Temp-Difference	-	-	°C	-	-	2	-	-	≤ 3	
Temp-Discharge Pipe	-	-	°C	-	-	28	-	-	Fulfill Aspirational Limit < 40	
Temp-Receiving Water	-	-	°C	-	-	30	-	-	N/A	
TSS	-	5	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 200	
COD	-	10	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 400	
Total Nitrogen (Total-N)	-	5	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit N/A	
pH Value	-	-	-	-	-	7.8	-	-	Fulfill Aspirational Limit 6.0 - 9.0	
Colour (436nm; 525nm; 620nm)	-	-	m ⁻¹	-	-	0.2; 0.2; 0.3	-	-	Fulfill Aspirational Limit N/A	
BOD (5-day)	-	5	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 80	
Ammonium Nitrogen (Ammonium-N)	-	0.5	mg/L	-	-	1.7	-	-	Fulfill Foundational Limit < 40	
Total Phosphorus (Total-P)	-	0.1	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit N/A	
AOX	-	0.1	mg/L	-	-	0.5	-	-	Fulfill Progressive Limit N/A	
Oil and Grease	-	0.5	mg/L	-	-	7.0	-	-	Fulfill Foundational Limit < 10	
Phenol	-	0.001	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 0.3	
Coliform	-	25	Bacteria / 100ml	-	-	44	-	-	Fulfill Progressive Limit N/A	
Persistent Foam	-	Not Visible	-	-	-	Not Visible	-	-	Fulfill Aspirational Limit N/A	
Anions										
Cyanide	-	0.05	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 1	
Sulfide	-	0.01	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit < 1	
Sulfite	-	0.2	mg/L	-	-	n.d.	-	-	Fulfill Aspirational Limit N/A	
Metals										
Total Antimony (Sb) [#]	7440-36-0	0.01	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	N/A

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	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Total Chromium (Cr)	7440-47-3	0.05	mg/L	n.d.	0.06	n.d.	Fulfill Aspirational Limit	Fulfill Progressive Limit	Fulfill Aspirational Limit	< 1
Total Cobalt (Co)	7440-48-4	0.01	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	N/A
Total Copper (Cu)	7440-50-8	0.25	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 1
Total Nickel (Ni)	7440-02-0	0.05	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 1
Total Silver (Ag)	7440-22-4	0.005	mg/L	n.d.	n.d.	n.d.	Aspirational Limit	Aspirational Limit	Fulfill Aspirational Limit	< 1
Total Zinc (Zn)	7440-66-6	0.5	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 5
Total Arsenic (As)	7440-38-2	0.005	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 1
Total Cadmium (Cd)	7440-43-9	0.01	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 0.1
Hexavalent Chromium (Cr-VI)	7440-47-3, 18540-29-9	0.001	mg/L	n.d.	n.d.	n.d.	Fulfill Aspirational Limit	Fulfill Aspirational Limit	Fulfill Aspirational Limit	< 1
Total Lead (Pb)	7439-92-1	0.01	mg/L	n.d.	n.d.	n.d.	Aspirational Limit	Aspirational Limit	Fulfill Aspirational Limit	< 0.5
Total Mercury (Hg)	7439-97-6	0.001	mg/L	n.d.	n.d.	n.d.	Aspirational Limit	Aspirational Limit	Fulfill Aspirational Limit	< 0.01
Alkylphenols (APs) & Alkylphenol Ethoxylates (APEOs)										
Nonylphenol (NP), mixed isomers	Multiple, including 104-40-5, 11066-49-2, 25154-52-3, 84852-15-3, 90481-84852-15-3	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Octylphenol (OP), mixed isomers	Multiple, including 140-66-9, 1806-26-4, 27193-28-8	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Octylphenol ethoxylates (OPEO)	Multiple, including 9002-93-1, 9036-19-5, 68987-90-6	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Nonylphenol ethoxylates (NPEO)	Multiple, including 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Chlorobenzenes & Chlorotoluenes (COCs)										
Monochlorobenzenes	108-90-7	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,2-Dichlorobenzene	95-50-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,3-Dichlorobenzene	541-73-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,4-Dichlorobenzene	106-46-7	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,2,3-Trichlorobenzene	87-61-6	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,2,4-Trichlorobenzene	120-82-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,3,5-Trichlorobenzene	108-70-3	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	CAS No.	Reporting Limit	Units	Sample ID			Factory Performances (Refer to Remarks in cover page)			*Local Requirements	
				KH21-4109-01	KH21-4109-02	KH21-4109-03					
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				Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
1,2,3,4-Tetrachlorobenzene	634-66-2	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
1,2,3,5-Tetrachlorobenzene	634-90-2	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
1,2,4,5-Tetrachlorobenzene	95-94-3	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Pentachlorobenzene	608-93-5	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Hexachlorobenzene	118-74-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2-Chlorotoluene	95-49-8	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
3-Chlorotoluene	108-41-8	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
4-Chlorotoluene	106-43-4	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3-Dichlorotoluene	32768-54-0	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,4-Dichlorotoluene	95-73-8	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,5-Dichlorotoluene	19398-61-9	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,6-Dichlorotoluene	118-69-4	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
3,4-Dichlorotoluene	95-75-0	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
3,5-Dichlorotoluene	25186-47-4	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3,4-Trichlorotoluene	7359-72-0	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3,6-Trichlorotoluene	2077-46-5	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,4,5-Trichlorotoluene	6639-30-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,4,6-Trichlorotoluene	23749-65-7	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
3,4,5-Trichlorotoluene	21472-86-6	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3,4,5-Tetrachlorotoluene	76057-12-0	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3,5,6-Tetrachlorotoluene	29733-70-8	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,3,4,6-Tetrachlorotoluene	875-40-1	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
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	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Pentachlorotoluene	877-11-2	0.2	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Chlorophenols										
2-Chlorophenol	95-57-8	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3-Chlorophenol	108-43-0	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
4-Chlorophenol	106-48-9	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3-Dichlorophenol	576-24-9	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4-Dichlorophenol	120-83-2	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,5-Dichlorophenol	583-78-8	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,6-Dichlorophenol	87-65-0	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,4-Dichlorophenol	95-77-2	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,5-Dichlorophenol	591-35-5	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,4-Trichlorophenol	15950-66-0	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,5-Trichlorophenol	933-78-8	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,6-Trichlorophenol	933-75-5	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4,5-Trichlorophenol	95-95-4	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4,6-Trichlorophenol	88-06-2	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,4,5-Trichlorophenol	609-19-8	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,4,6-Tetrachlorophenol	58-90-2	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,3,5,6-Tetrachlorophenol	935-95-5	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Pentachlorophenol	87-86-5	0.5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Azo Dyes										
4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
4,4'-Diaminodiphenylmethane	101-77-9	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

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4,4'-Oxydianiline	101-80-4	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
p-Chloroaniline	106-47-8	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,3'-Dimethoxybenzidine	119-90-4	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,3'-Dimethylbenzidine	119-93-7	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
p-Cresidine	120-71-8	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4,5-Trimethylaniline	137-17-7	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
4,4'-Thiodianiline	139-65-1	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
p-Aminoazobenzene	60-09-3	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4-Diaminoanisole	615-05-4	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,6-Xylidine	87-62-7	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
o-Anisidine	90-04-0	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2-Naphthylamine	91-59-8	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
3,3'-Dichlorobenzidine	91-94-1	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
4-Aminodiphenyl	92-67-1	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzidine	92-87-5	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
o-Toluidine	95-53-4	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4-Xylidine	95-68-1	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
4-Chloro-o-Toluidine	95-69-2	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2,4-Toluylenediamine	95-80-7	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
o-Aminoazotoluene	97-56-3	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
2-Amino-4-Nitrotoluene	99-55-8	0.1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
	Date of Sampling			30-03-2021	30-03-2021	30-03-2021				
	Sampling Location			Incoming Water	ETP Inlet	ETP Outlet				
	Sampling Start Time			10:30	11:45	11:00				
	Sampling End Time			10:30	17:45	17:00				
	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Carcinogenic Dyes										
Direct Black 38	1937-37-7	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Direct Blue 6	2602-46-2	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Acid Red 26	3761-53-3	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Red 9	569-61-9	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Direct Red 28	573-58-0	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Violet 14	632-99-5	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Blue 1	2475-45-8	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Blue 3	2475-46-9	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Blue 26	2580-56-5	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Green 4 (malachite green chloride)^	569-64-2	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Green 4 (malachite green oxalate)^	2437-29-8	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Basic Green 4 (malachite green)	10309-95-2	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Orange 11	82-28-0	500	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Dyes										
Disperse Yellow 1	119-15-3	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Blue 102	12222-97-8	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Blue 106	12223-01-7	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Yellow 39	12236-29-2	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Orange 37/59/76	13301-61-6	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Brown 1	23355-64-8	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Orange 1	2581-69-3	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Yellow 3	2832-40-8	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Disperse Red 11	2872-48-2	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID						Factory Performances (Refer to Remarks in cover page)			*Local Requirements	
	Sample ID	KH21-4109-01	KH21-4109-02	KH21-4109-03							
	Date of Sampling	30-03-2021	30-03-2021	30-03-2021							
	Sampling Location	Incoming Water	ETP Inlet	ETP Outlet							
	Sampling Start Time	10:30	11:45	11:00							
	Sampling End Time	10:30	17:45	17:00							
Date of Sample Received	30-03-2021	30-03-2021	30-03-2021								
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water		
Disperse Red 1	2872-52-8	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Red 17	3179-89-3	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Blue 7	3179-90-6	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Blue 26	3860-63-7	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Yellow 49	54824-37-2	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Blue 35	12222-75-2, 56524-77-7	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Blue 124	61951-51-7	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Yellow 9	6373-73-5	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Disperse Orange 3	730-40-5	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Flame Retardants											
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Decabromodiphenyl ethers (DecaBDE)	1163-19-5	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Pentabromodiphenyl ethers (PentaBDE)	32534-81-9	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Octabromodiphenyl ethers (OctaBDE)	32536-52-0	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Bis(2,3-dibromopropyl)phosphate (BIS)	5412-25-9	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Polybrominated biphenyls (PBBs)	59536-65-1	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Tetrabromobisphenol A (TBBPA)	79-94-7	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Hexabromocyclododecane (HBCDD)	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	13674-87-8	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	
Short Chain Chlorinated Paraffins (SCCP), C ₁₀ -C ₁₃	85535-84-8	5	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-	

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	CAS No.	Reporting Limit	Units	Sample ID			Factory Performances (Refer to Remarks in cover page)				*Local Requirements	
				KH21-4109-01	KH21-4109-02	KH21-4109-03						
				Date of Sampling	30-03-2021	30-03-2021						30-03-2021
				Sampling Location	Incoming Water	ETP Inlet						ETP Outlet
				Sampling Start Time	10:30	11:45						11:00
				Sampling End Time	10:30	17:45						17:00
Date of Sample Received	30-03-2021	30-03-2021	30-03-2021									
Items	CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water		
Glycols												
Bis(2-methoxyethyl)-ether	111-96-6	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
2-Ethoxyethanol	110-80-5	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
2-Ethoxyethyl acetate	111-15-9	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Ethylene glycol dimethyl ether	110-71-4	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
2-Methoxyethanol	109-86-4	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
2-Methoxyethylacetate	110-49-6	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
2-Methoxypropylacetate	70657-70-4	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Triethylene glycol dimethyl ether	112-49-2	50	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Halogenated Solvents												
1,2-Dichloroethane	107-06-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Methylene chloride	75-09-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Trichloroethene	79-01-6	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Tetrachloroethene	127-18-4	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Organotin Compounds												
Mono-, di- and tri-methyltin derivatives	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Monomethyltin (MMT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Dimethyltin (DMT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Trimethyltin (TMT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Mono-, di- and tri-butyltin derivatives	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Monobutyltin (MBT)	1118-46-3, 78763-54-9	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Dibutyltin (DBT)	1002-53-5	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Tributyltin (TBT)	56573-85-4	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		
Mono-, di- and tri-phenyltin derivatives	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-		

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
	Date of Sampling			30-03-2021	30-03-2021	30-03-2021				
	Sampling Location			Incoming Water	ETP Inlet	ETP Outlet				
	Sampling Start Time			10:30	11:45	11:00				
	Sampling End Time			10:30	17:45	17:00				
	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Monophenyltin (MPhT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Diphenyltin (DPhT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Triphenyltin (TPhT)	892-20-6, 668-34-8	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Mono-, di- and tri-octyltin derivatives	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Monooctyltin (MOT)	15231-57-9	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Diocetyl tin (DOT)	94410-05-6, 12531-44-4	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Triocetyl tin (TOT)	Multiple	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Perfluorinated / Polyfluorinated Chemicals (PFCs)										
PFOS	1763-23-1	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
PFOA	335-67-1	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
PFBS	375-73-5, 59933-66-3, 29420-49-3, 29420-43-3	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
PFHxA	307-24-4	0.01	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
8:2 FTOH	678-39-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
6:2 FTOH	647-42-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Phthalates										
Di(2-Ethyl Hexyl) Phthalate (DEHP)	117-81-7	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-N-Octyl Phthalate (DNOP)	117-84-0	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-Iso-Decyl Phthalate (DIDP)	26761-40-0, 68515-49-1	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-Iso-Nonyl Phthalate (DINP)	28553-12-0, 68515-48-0	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-N-Hexyl Phthalate (DNHP)	84-75-3	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Dibutyl Phthalate (DBP)	84-74-2	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzyl Butyl Phthalate (BBP)	85-68-7	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Dinonyl phthalate (DNP)	84-76-4	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
	Date of Sampling			30-03-2021	30-03-2021	30-03-2021				
	Sampling Location			Incoming Water	ETP Inlet	ETP Outlet				
	Sampling Start Time			10:30	11:45	11:00				
	Sampling End Time			10:30	17:45	17:00				
	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water	
Diethyl Phthalate (DEP)	84-66-2	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-N-Propyl Phthalate (DPRP)	131-16-8	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-Iso-Butyl Phthalate (DIBP)	84-69-5	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Dicyclohexyl Phthalate (DCHP)	84-61-7	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Di-Iso-Octyl Phthalate (DIOP)	27554-26-3	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,2-Benzenedicarboxylic acid, Di-C7-11 Branched and Linear Alkyl Esters (DHNUP)	68515-42-4	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
1,2-Benzenedicarboxylic acid, Di-C6-8 Branched Alkyl Esters, C7-rich (DIHP)	71888-89-6	10	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Polycyclic Aromatic Hydrocarbons (PAHs)										
Benzo[a]pyrene	50-32-8	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Anthracene	120-12-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Pyrene	129-00-0	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[ghi]perylene	191-24-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[e]pyrene	192-97-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Indeno[1,2,3-cd]pyrene	193-39-5	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[j]fluoranthene	205-82-3	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[b]fluoranthene	205-99-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Fluoranthene	206-44-0	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[k]fluoranthene	207-08-9	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Acenaphthylene	208-96-8	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Chrysene	218-01-9	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Dibenz[a,h]anthracene	53-70-3	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Benzo[a]anthracene	56-55-3	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Acenaphthene	83-32-9	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

TEST RESULTS

Factory Name: Kassim Textiles (Pvt) Ltd

Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Items	Sample ID			KH21-4109-01	KH21-4109-02	KH21-4109-03	Factory Performances (Refer to Remarks in cover page)			*Local Requirements
	Date of Sampling			30-03-2021	30-03-2021	30-03-2021				
	Sampling Location			Incoming Water	ETP Inlet	ETP Outlet				
	Sampling Start Time			10:30	11:45	11:00				
	Sampling End Time			10:30	17:45	17:00				
	Date of Sample Received			30-03-2021	30-03-2021	30-03-2021				
	CAS No.	Reporting Limit	Units	Incoming Water	Raw Waste Water	Discharged Waste Water	Incoming Water	Raw Waste Water	Discharged Waste Water	Discharged Waste Water
Phenanthrene	85-01-8	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Fluorene	86-73-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Naphthalene	91-20-3	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Volatile Organic Compounds (VOCs)										
Benzene	71-43-2	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
Xylene	1330-20-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
o-cresol	95-48-7	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
p-cresol	106-44-5	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-
m-cresol	108-39-4	1	µg/L	N/A	n.d.	n.d.	N/A	Not Detected	Not Detected	-

Remarks:

*"n.d." = Not Detected

*"N/A" = Not Tested

*"-" = Not Required to be Test

^The test result is based on the calculation of selected element(s) and to the worst-case scenario

^Data collection only for polyester production

*Please refer to the details of the Local Requirements in the Appendix Section

**Discharged Waste water flow data is provided by the client

TEST PARAMETERS

Factory Name: Kassim Textiles (Pvt) Ltd
 Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

ITEMS	CAS No.	METHODS	ZDHC REQUIREMENTS			Units
			Foundational Limit	Progressive Limit	Aspirational Limit	
Conventional Parameters						
Temperature	-	USEPA 170.1 or GB/T 13195	Δ15 / max.35	Δ10 or 30	Δ5 or 25	°C
TSS	-	USEPA 160.2, APHA 2540D, ISO 11923 or GB/T 11901	50	15	5	mg/L
COD	-	USEPA 410.4, APHA 5220D, ISO 6060 or HJ 828	150	80	40	mg/L
Total Nitrogen (Total-N)	-	USEPA 351.2, APHA 4500P-J, APHA 4500N-C, ISO 5663, ISO 29441, HJ 636 or GB 11891	20	10	5	mg/L
pH Value	-	USEPA 150.1, APHA 4500-H+, ISO 10523 or GB/T 6920	6-9	6-9	6-9	-
Colour (436nm; 525nm; 620nm)	-	ISO 7887 (Method B)	7; 5; 3	5; 3; 2	2; 1; 1	m ⁻¹
BOD (5-day)	-	USEPA 405.1, APHA 5210B, ISO 5815-1, EN 1899-1 or HJ 505	30	15	5	mg/L
Ammonium Nitrogen (Ammonium-N)	-	USEPA 350.1, APHA 4500NH ₃ -N, ISO 7150, ISO 11732, HJ 535 or HJ 536	10	1	0.5	mg/L
Total Phosphorus (Total-P)	-	USEPA 365.4, APHA 4500P-J, ISO 6878, ISO 11885 or GB/T 11893	3	0.5	0.1	mg/L
AOX	-	USEPA 1650, ISO 9562, EN ISO 9563 or HJ/T 83-2001	5	1	0.1	mg/L
Oil and Grease	-	USEPA 1664, ISO 9377-2 or HJ 637	10	2	0.5	mg/L
Phenol	-	APHA 5530 B, C & D, ISO 14402 or HJ 503	0.5	0.01	0.001	mg/L
Coliform	-	USEPA 9132, ISO 9308-1 or GB/T 5750.12	400	100	25	Bacteria / 100ml
Persistent Foam	-	N/A	Not visible	Not visible	Not visible	-
Anions						
Cyanide	-	<u>Wastewater:</u> USEPA 335.2, APHA 4500-CN, ISO 6703-1,-2,-3, ISO 14403-1,-2 or HJ 484 <u>Sludge:</u> With reference to USEPA 9013, USEPA 9014, USEPA 9213, ISO 11262, HJ 745 or CN converted to HCN by reflux-distillation to NaOH followed by colourimetry or ISE	0.2	0.1	0.05	mg/L
Sulfide	-	APHA 4500-S2-D, ISO 10530 or GB/T 16489	0.5	0.05	0.01	mg/L
Sulfite	-	USEPA 377.1, ISO10304-3 or HJ 84	2	0.5	0.2	mg/L
Metals						
Total Antimony (Sb)	7440-36-0		0.1	0.05	0.01	mg/L
Total Chromium (Cr)	7440-47-3		0.2	0.1	0.05	mg/L
Total Cobalt (Co)	7440-48-4		0.05	0.02	0.01	mg/L
Total Copper (Cu)	7440-50-8	<u>Wastewater:</u> With reference to USEPA 200.7, USEPA 200.8, USEPA 6010C, USEPA 6020A, ISO 11885, ISO 12846, ISO 17852, ISO 18412, GB 7466, GB 7467, GB 7472, GB 7475, GB 11907, HJ 597, HJ 700 or acid digestion followed by ICP or ICP/MS analysis	1	0.5	0.25	mg/L
Total Nickel (Ni)	7440-02-0	<u>Sludge:</u> With reference to USEPA 3050, USEPA 3051A, USEPA 3060A, USEPA 6010D, USEPA 6020B, USEPA 7471B or acid/peroxide digestion followed by ICP or ICP/MS analysis	0.2	0.1	0.05	mg/L
Total Silver (Ag)	7440-22-4		0.1	0.05	0.005	mg/L
Total Zinc (Zn)	7440-66-6		5.0	1.0	0.5	mg/L
Total Arsenic (As)	7440-38-2		0.05	0.01	0.005	mg/L
Total Cadmium (Cd)	7440-43-9		0.1	0.05	0.01	mg/L

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ITEMS	CAS No.	METHODS	ZDHC REQUIREMENTS			Units
			Foundational Limit	Progressive Limit	Aspirational Limit	
Hexavalent Chromium (Cr-VI)	7440-47-3, 18540-29-9	<u>Wastewater:</u> With reference to USEPA 218.6, ISO 18412, GB 7467 or solvent extraction and derivatisation followed by UV/VIS analysis <u>Sludge:</u> With reference to USEPA 7196, USEPA 7199 or alkaline digestion followed by colourimetric UV/VIS or colourimetric IC analysis	0.05	0.005	0.001	mg/L
Total Lead (Pb)	7439-92-1	<u>Wastewater:</u> With reference to USEPA 200.7, USEPA 200.8, USEPA 6010C, USEPA 6020A, ISO 11885, ISO 12846, ISO 17852, ISO 18412, GB 7466, GB 7467, GB 7472, GB 7475, GB 11907, HJ 597, HJ 700 or acid digestion followed by ICP or ICP/MS analysis <u>Sludge:</u> With reference to USEPA 3050, USEPA 3051A, USEPA 3060A, USEPA 6010D, USEPA 6020B, USEPA 7471B or acid/peroxide digestion followed by CVAA, ICP or ICP/MS analysis	0.1	0.05	0.01	mg/L
Total Mercury (Hg)	7439-97-6	<u>Wastewater:</u> With reference to USEPA 3050, USEPA 3051A, USEPA 3060A, USEPA 6010D, USEPA 6020B, USEPA 7471B or acid/peroxide digestion followed by CVAA, ICP or ICP/MS analysis	0.01	0.005	0.001	mg/L
Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs)						
NP / OP		<u>Wastewater:</u> With reference to ISO 18857-2 or ASTM D7065 followed by GC/MS or LC/MS(-MS) analysis <u>Sludge:</u> With reference to USEPA 3540/3541, USEPA 3550, USEPA 3560, ISO 18857-2 or ASTM D7065 followed by GC/MS or LC/MS analysis			-	
NPEO / OPEO		<u>Wastewater:</u> With reference to ISO 18254-1, ISO 18857-2 or ASTM D7065 followed by GC/MS or LC/MS analysis <u>Sludge:</u> With reference to ISO 18254-1, ISO 18857-2 or ASTM D7065 followed by GC/MS or LC/MS analysis			-	
Chlorobenzenes and Chlorotoluenes (COCs)						
		<u>Wastewater:</u> With reference to USEPA 8260B, USEPA 8270D or solvent extraction followed by GC/MS analysis <u>Sludge:</u> With reference to USEPA 3540/3541, USEPA 3550, USEPA 3560, USEPA 3650, USEPA 8270 or solvent extraction followed by GC/MS analysis			-	
Chlorophenols						
		<u>Wastewater:</u> With reference to USEPA 8270D, ISO 14154 or solvent extraction and derivatisation with KOH, acetic anhydride followed by GC/MS analysis <u>Sludge:</u> With reference to ISO 14154, acid/base liquid extraction, acetylation or liquid/liquid extraction followed by GC/MS analysis			-	
Azo Dyes						
		<u>Wastewater:</u> With reference to USEPA 8270D, EN 14362-1, EN 14362-3 or solvent extraction with sodium dithionite reduction followed by GC/MS or LC/MS analysis			-	
Carcinogenic Dyes						
		<u>Wastewater:</u> Solvent extraction followed by LC/MS analysis <u>Sludge:</u> With reference to ISO 16373 or solvent extraction followed by LC/MS analysis			-	
Disperse Dyes						
		<u>Wastewater:</u> Solvent extraction followed by LC/MS analysis <u>Sludge:</u> With reference to ISO 16373 or solvent extraction followed by LC/MS analysis			-	

TEST PARAMETERS

Factory Name: Kassim Textiles (Pvt) Ltd
 Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

ITEMS	CAS No.	METHODS	ZDHC REQUIREMENTS			Units
			Foundational Limit	Progressive Limit	Aspirational Limit	
Flame Retardants		<u>Wastewater:</u> With reference to USEPA 527, USEPA 8270, USEPA 8321B, ISO 22032 or solvent extraction followed by GC/MS or LC/MS analysis <u>Sludge:</u> With reference to ISO 22032 or solvent extraction followed by GC/MS or LC/MS analysis		-		
Glycols		<u>Wastewater:</u> With reference to USEPA 8270 or solvent extraction followed by GC/MS or LC/MS analysis <u>Sludge:</u> With reference to USEPA 8270D, ISO 22892 or solvent extraction followed by GC/MS or LC/MS analysis		-		
Halogenated Solvents		<u>Wastewater:</u> With reference to USEPA 8260B, Purge-and-Trap, Headspace or solvent extraction followed by GC/MS analysis <u>Sludge:</u> With reference to USEPA 5035, USEPA 50211, USEPA 8010 or solvent extraction followed by GC/MS analysis		-		
Organotin Compounds		<u>Wastewater:</u> With reference to ISO 17353 and derivatisation with sodium diethyl dithiocarbamate followed by GC/MS analysis <u>Sludge:</u> With reference to ISO 23161 and derivatisation with sodium diethyl dithiocarbamate followed by GC/MS analysis		-		
Perfluorinated / Polyfluorinated Chemicals (PFCs)						
FTOHs (Non-ionic)		<u>Wastewater:</u> With reference to DIN38407-42 or CEN/TS 15968 and derivatisation with acetic anhydride followed by GC/MS analysis <u>Sludge:</u> With reference to DIN38407-42 and derivatisation with acetic anhydride followed by GC/MS analysis		-		
Others (Ionic)		<u>Wastewater:</u> With reference to DIN38407-42 or CEN/TS 15968 followed by LCMS or LC/MS(-MS) analysis <u>Sludge:</u> With reference to DIN38407-42 followed by LCMS or LC/MS(-MS) analysis		-		
Phthalates		<u>Wastewater:</u> With reference to USEPA 8270D, ISO 18856 or solvent extraction followed by GC/MS analysis <u>Sludge:</u> With reference to USEPA 3540/3541, USEPA 3550, USEPA 3560, ISO 18856 or solvent extraction followed by GC/MS analysis		-		
Polycyclic Aromatic Hydrocarbons (PAHs)		<u>Wastewater:</u> With reference to USEPA 8270, DIN 38407-39 or solvent extraction followed by GC/MS analysis <u>Sludge:</u> With reference to USEPA 3540/3541, USEPA 3550, USEPA 3560, USEPA 3650, USEPA 8270 or solvent extraction followed by GC/MS analysis		-		
Volatile Organic Compounds (VOCs)		<u>Wastewater:</u> With reference to USEPA 8260B, Purge-and-Trap, Headspace or solvent extraction followed by GC/MS analysis <u>Sludge:</u> With reference to USEPA 5035, USEPA 5021, USEPA 8260, DIN 38407 Part 43 or solvent extraction followed by GC/MS analysis		-		

PIPING PLAN

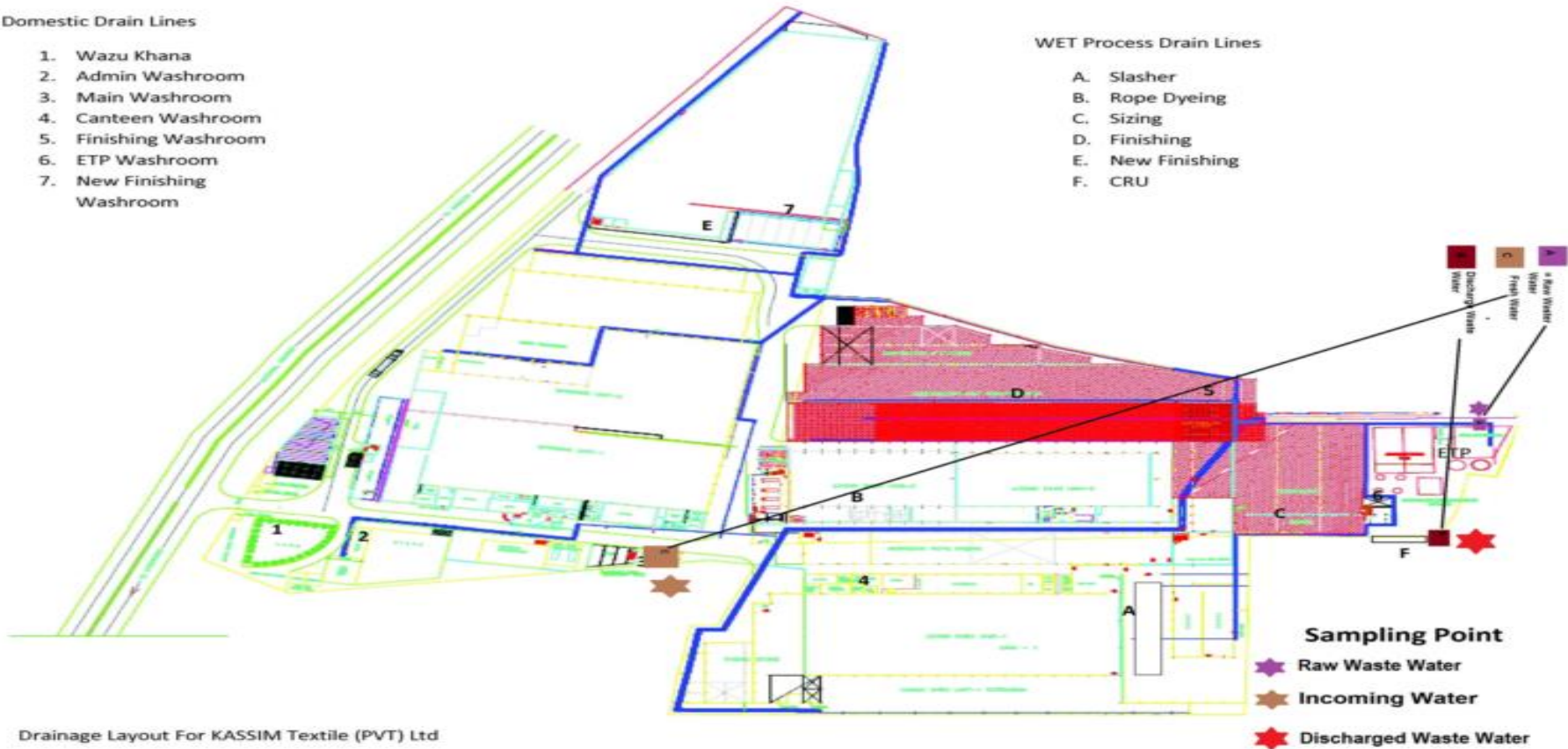
Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Domestic Drain Lines

1. Wazu Khana
2. Admin Washroom
3. Main Washroom
4. Canteen Washroom
5. Finishing Washroom
6. ETP Washroom
7. New Finishing Washroom

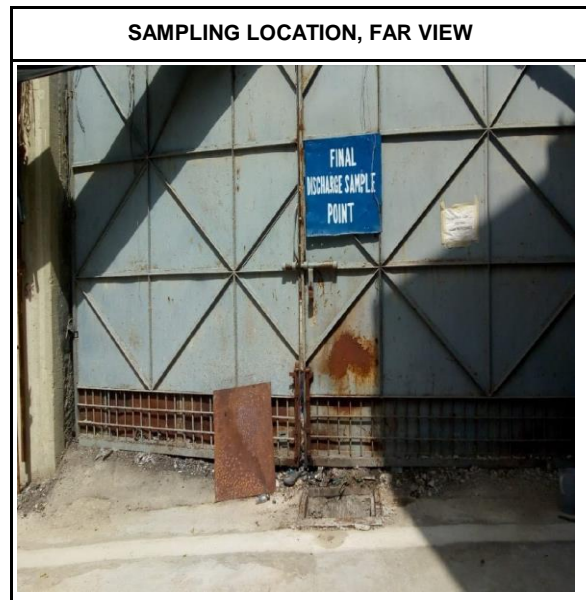
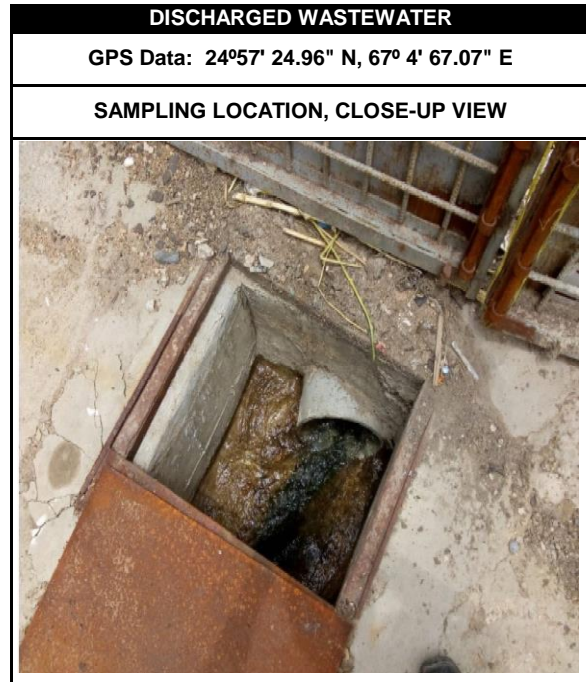
WET Process Drain Lines

- A. Slasher
- B. Rope Dyeing
- C. Sizing
- D. Finishing
- E. New Finishing
- F. CRU



SAMPLING PHOTOS

Factory Name: Kassim Textiles (Pvt) Ltd
 Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.



SAMPLING PHOTOS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

RAW WASTEWATER

GPS Data: 24°57' 24.97" N, 67° 4' 67.60" E

SAMPLING LOCATION, CLOSE-UP VIEW



SAMPLING LOCATION, FAR VIEW



SAMPLING PHOTOS

Factory Name: Kassim Textiles (Pvt) Ltd
Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

INCOMING WATER

GPS Data: 24°57' 24.95" N, 67° 4' 67.04" E

SAMPLING LOCATION, CLOSE-UP VIEW



SAMPLING LOCATION, FAR VIEW



REGULATORY REQUIREMENTS BASED ON PAKISTAN: EPA/TECH/739/2014 SINDH ENVIRONMENTAL QUALITY

Factory Name: Kassim Textiles (Pvt) Ltd
 Factory Address: Plot no. 62, 25 Km National Highway, Landhi, Karachi.

Parameters	Discharged Waste Water		
	Discharge into Inland water		
		Value	Unit
Temperature Increase*	≤	3	°C
Temperature	<	40	°C
TSS	<	200	mg/L
COD	<	400	mg/L
pH Value (min.)	-	6.0	-
pH Value (max.)	-	9.0	-
BOD (5-day)	<	80**	mg/L
Oil and Grease	<	10	mg/L
Phenol	<	0.3	mg/L
Cyanide	<	1	mg/L
Sulfide	<	1	mg/L
Ammonia (NH ₃)	<	40	mg/L
Total Chromium (Cr)	<	1	mg/L
Total Copper (Cu)	<	1	mg/L
Total Nickel (Ni)	<	1	mg/L
Total Silver (Ag)	<	1	mg/L
Total Zinc (Zn)	<	5	mg/L
Total Arsenic (As)	<	1	mg/L
Total Cadmium (Cd)	<	0.1	mg/L
Hexavalent Chromium (Cr-VI)	<	1	mg/L
Total Lead (Pb)	<	0.5	mg/L
Total Mercury (Hg)	<	0.01	mg/L

*The effluent should not result in temperature increase of more than 3°C at the edge of the zone where initial mixing and dilution take place in the receiving body. In case zone is not defined, use 100 meters from the point of discharge.

** The value for industry is 200 mg/L

***** END OF REPORT *****