

**Test Report No.:** 326034682a 001**Client:** HUNAN JIEXIN TEXTILE PRINTING AND DYEING CO., LTD.No.18 Shangde Road Economic and Technological Development Zone,  
Changde, Hunan,China**Buyer's Name** : -**Factory Details**

Factory Name : Hunan Jiexin Textile Printing and Dyeing Co., Ltd.  
 Factory Address (with geographical coordinates) : No.18 Shangde Road Economic and Technological Development Zone, Changde, Hunan, China  
 On-site ETP : Y  
 Discharge Type of Wastewater : Indirect discharge  
 Destination of Wastewater : Changde Qinglan Water Co., Ltd.

**For Indirect discharge**

Name of public wastewater treatment plants(CETP) : Changde Qinglan Water Co., Ltd.  
 Address of public wastewater treatment plants(CETP) : No.11 Xinbaoyuan Wuyi Village Zhangmuqiao Street Economic and Technological Development Zone, Changde, Hunan, China

**Sampling Details**

Sampling Date : 2024-07-05  
 Sample Receiving Date : 2024-07-08  
 Testing Period : 2024-07-08 to 2024-07-12  
 Parameter(s) exceeded maximum holding time : Yes (pH Value, Fecal Coliform)  
 Sampling Method:

Sample Type	Total Volume	1	2	3	4	5	6	7
Discharged Wastewater	1.2L	10:00	11:00	12:00	13:00	14:00	15:00	16:00
Raw Wastewater	15.2L	10:40	11:40	12:40	13:40	14:40	15:40	16:40
Incoming Water	4.9L	09:30	-	-	-	-	-	-
Sludge	5.5L	11:20	-	-	-	-	-	-

Overall Rating	Discharged Wastewater	Raw Wastewater	Sludge
Conventional Parameters / Anion / Metals	Fulfill Aspirational Limit	Not Tested	Report Only
MRSL Parameters	Not Tested	Comply	Report Only
Legal Compliance	Not Tested	Not Tested	Not Tested
Specifications	ZDHC Wastewater Guidelines Version 2.1 (November 2022)		

For and on behalf of  
 TÜV Rheinland (Shanghai) Co., Ltd.



2024-07-15

Carmen Yan / Department Manager

Date

Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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**Result Summary :**

Conventional Parameters	Incoming Water	Discharged Wastewater	Raw Wastewater	Sludge
pH Value	-	-	-	Report Only
Anion - Cyanide	-	-	-	Report Only
Heavy Metals	-	Aspirational	-	Report Only
%Solids	-	-	-	Report Only
Paint Filter Test	-	-	-	Report Only
Fecal Coliform	-	-	-	Report Only
Manufacturing Restricted Substances List (MRSL)	Incoming Water	Discharged Wastewater	Raw Wastewater	Sludge
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): Including All Isomers	-	-	Comply	Report Only
Anti-Microbials & Biocides	-	-	Comply	-
Chlorinated Paraffins	-	-	Comply	-
Chlorobenzenes and Chlorotoluenes	-	-	Comply	Report Only
Chlorophenols	-	-	Comply	-
Dimethyl Formamide (DMFa)	-	-	Comply	-
Dyes - Carcinogenic or Equivalent Concern	-	-	Comply	-
Dyes - Disperse (Sensitizing)	-	-	Comply	-
Dyes - Navy Blue Colorant	-	-	Comply	-
Flame Retardants	-	-	Comply	-
Glycols / Glycol Ethers	-	-	Comply	-
Halogenated Solvents	-	-	Comply	-
Organotin Compounds	-	-	Comply	-
Other / Miscellaneous Chemicals	-	-	Comply	-
Perfluorinated and Polyfluorinated Chemicals (PFCs)	-	-	Comply	-
Phthalates - Including all other esters of phthalic acid	-	-	Comply	-
Polycyclic Aromatic Hydrocarbons (PAHs)	-	-	Comply	Report Only
Restricted Aromatic Amines(Cleavable from Azo)	-	-	Comply	-
UV Absorbers	-	-	Comply	-
Volatile Organic Compounds (VOC)	-	-	Comply	-

**Note:** Aspirational = Fulfill Aspirational Limit  
 Foundational = Fulfill Foundational Limit  
 Comply = Comply with ZDHC Limit  
 - = Not Tested

Progressive = Fulfill Progressive Limit  
 Exceed = Exceed Foundational Limit  
 Not Comply = Not Comply with ZDHC Limit

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**Material List:**

Field ID	Sample Type	Sample Description
D001	Discharge	Discharge Wastewater (Indirect Discharge)*
R001	Raw	Raw Wastewater*
S001	Sludge	Sludge (Type A)*

**Notes:**

- \* **Discharge Wastewater:** Wastewater that is released from a supplier, either directly to the environment (including but not limited to: water bodies, land application/irrigation), or to a wastewater treatment system beyond the supplier's property boundaries.
- \* **Direct Discharge:** A point source that discharges wastewater to stream, lakes, oceans, or other receiving bodies. Distribution of wastewater onto land is also considered a type of direct discharge. Municipal bodies and suppliers that introduce pollution through a defined conveyance or system such as outlet pipes are direct dischargers.
- \* **Indirect Discharge:** The discharge of wastewater through a sanitary or industrial wastewater sewer system to a central or common effluent treatment plant (CETP) not owned and/ or operated by the supplier discharging the pollutants.
- \* **Raw Wastewater: (Untreated Wastewater)** Wastewater that has not yet been treated prior to direct or indirect discharge, or recycling efforts. This wastewater therefore does not meet the quality standards for beneficial use.
- \* **Sludge:** The solid or semi-solid material separated during the wastewater treatment process, including septic and Zero Liquid Discharge (ZLD) systems.
- \* **Incoming Water:** Water that is supplied to a manufacturing process, usually withdrawn from surface water bodies, groundwater, collected from rainfall, supplied by municipalities, etc.
- Type A:** Offsite Incineration at > 1000°C.
- Type B:** Landfill with Significant Control Measures.
- Type C:** Building Products Processed at > 1000°C.
- Type D:** Landfill with Limited Control Measures.
- Type E:** Offsite Incineration and Building Products Processed at < 1000°C.
- Type F:** Landfill with No Control Measures.
- Type G:** Land Application.

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**1.pH Value**

					Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result	
pH Value	PH	HJ 962	NONE	NA	6.92	
Conclusion					Report Only	

**Abbreviation:** NA = Not Applicable

**Remark:**

The limits according to ZDHC limit (Table 3 & 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Wastewater Limit		
	Foundational	Progressive	Aspirational
pH Value	6-9		

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
pH Value	Report Only	Report Only	5-11	5-11	5-11	6.5-9	6.5-9

**2. Anion - Cyanide**

					Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result	
Anion - Cyanide	57-12-5	HJ 745	mg/kg	10	< RL	
Conclusion					Report Only	

**Abbreviation:** < =less than  
 RL =reporting limit  
 mg/L = milligram per liter  
 mg/kg = milligram per kilogram

**Remark:**

The limits according to ZDHC limit (Table 3 & 4A & 4D of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit for Wastewater (mg/L)		
	Foundational	Progressive	Aspirational
Anion - Cyanide	0.2	0.1	0.05

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
Anion - Cyanide	Sample and Report only		100	85	70	70	70

**3.Heavy Metals**

				Sample No.	D001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Arsenic (As)	Arsenic	US EPA 6020a	mg/L	0.001	< RL
Cadmium (Cd)	Cadmium	US EPA 6020a	mg/L	0.001	< RL
Chromium (Cr VI)	Chromium VI	GB 7467	mg/L	0.001	< RL
Lead (Pb)	Lead	US EPA 6020a	mg/L	0.001	< RL
Mercury (Hg)	Mercury	ISO 17294-2	mg/L	0.001	< RL
Conclusion					Fulfill Aspirational Limit

				Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Antimony (Sb)	Antimony	HJ 803	mg/kg	5	< RL
Chromium (Cr, total)	Chromium Total	HJ 803	mg/kg	50	< RL
Cobalt (Co)	Cobalt	US EPA 7196	mg/kg	400	< RL
Copper (Cu)	Copper	HJ 803	mg/kg	50	< RL
Nickel (Ni)	Nickel	HJ 803	mg/kg	20	< RL
Silver (Ag)	Silver	US EPA 6020b	mg/kg	50	< RL
Zinc (Zn)	Zinc	HJ 803	mg/kg	400	< RL
Arsenic (As)	Arsenic	HJ 803	mg/kg	5	< RL
Cadmium (Cd)	Cadmium	HJ 803	mg/kg	1	< RL
Chromium (Cr VI)	Chromium VI	US EPA 7196	mg/kg	20	< RL
Lead (Pb)	Lead	HJ 803	mg/kg	5	< RL
Mercury (Hg)	Mercury	US EPA 6020b	mg/kg	1	< RL
Barium (Ba)	Barium	US EPA 6020b	mg/kg	200	< RL
Selenium (Se)	Selenium	US EPA 6020b	mg/kg	5	< RL
Conclusion					Report Only

**Abbreviation:** < =less than  
 RL =reporting limit  
 mg/L = milligram per liter  
 mg/kg = milligram per kilogram

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**Remark:**

The limits according to ZDHC limit (Table 2 & 4A & 4B of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit for Wastewater (mg/L)			ZDHC Limit for Sludge (mg/kg)		
	Foundational	Progressive	Aspirational	Disposal pathway A-F	Disposal pathway G	Total Metals Threshold Values**
Antimony (Sb)	0.1	0.05	0.01	Report only	Sample and report only	12
Chromium (Cr, total)	0.2	0.1	0.05		3000	100
Cobalt (Co)	0.05	0.02	0.01		Sample and report only	1600
Copper (Cu)	1	0.5	0.25		4300	200
Nickel (Ni)	0.2	0.1	0.05		420	70
Silver (Ag)	0.1	0.05	0.005		Sample and report only	100
Zinc (Zn)	5.0	1.0	0.5		7500	1000
Arsenic (As)	0.05	0.01	0.005		75	10
Cadmium (Cd)	0.1	0.05	0.01		85	3
Chromium (Cr VI)	0.05	0.005	0.001		50	50
Lead (Pb)	0.1	0.05	0.01		840	10
Mercury (Hg)	0.01	0.005	0.001		57	1
Barium (Ba)	Sample and report only				Sample and report only	700
Selenium (Se)	Sample and report only				100	10
Tin (Sn)	Sample and report only				NA	NA

\* For polyester wet processing facilities Foundational, Progressive and Aspirational limits do not yet apply (unless required by law or voluntarily adopted).

\*\* if the Total Metals for Sludge exceeded the Total Metals Threshold Values (mg/kg) given in this table, proceed with Leachate Heavy Metal.

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**4.%Solids**

				Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result
%Solids	%Solids	HJ 613 at 105°C	%	NA	22.1
Conclusion					Report Only

**Abbreviation:** % = percentage  
NA = Not Applicable

**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
%Solids	Sample and Report Only						



**5.Paint Filter Test**

				Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Paint Filter Test	Free Liquid	EPA 9095B	NA	NA	Not visible
Conclusion					Report Only

**Abbreviation:** NA = Not Applicable

**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
Paint Filter Test	Sample and Report Only			Pass Paint Filter Test			Sample and Report Only

**6.Fecal Coliform**

				Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Fecal Coliform	Fecal Coliform	EPA 1681	MPN/g	10	< RL
Conclusion					Report Only

**Abbreviation:** MPN/g = Most Probable Number per gram

**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (MPN/g)						
	A	B	C	D	E	F	G
Fecal Coliform	Sample and Report Only					1000	1000

**7. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): Including All Isomers**

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001
				RL	ZDHC Limit	Result
Nonylphenol (NP), mixed isomers	104-40-5 25154-52-3 11066-49-2 84852-15-3	ISO 18857-2	µg/L	5	5	< RL
Octylphenol (OP), mixed isomers	140-66-9 1806-26-4 27193-28-8	ISO 18857-2	µg/L	5	5	< RL
Nonylphenol ethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	ISO 18254-1, ASTM D7065	µg/L	5	5	< RL
Octylphenol ethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6	ISO 18254-1, ASTM D7065	µg/L	5	5	< RL
Conclusion						Comply

Parameter	Parameter Code	Test Method	Unit	Sample No.		S001
				RL	Result	
Nonylphenol (NP), mixed isomers	104-40-5 25154-52-3 11066-49-2 84852-15-3	ISO 18857-2	mg/kg	0.2		< RL
Octylphenol (OP), mixed isomers	140-66-9 1806-26-4 27193-28-8	ISO 18857-2	mg/kg	0.2		< RL
Nonylphenol ethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	ISO 18254-1, ASTM D7065	mg/kg	0.2		< RL
Octylphenol ethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6	ISO 18254-1, ASTM D7065	mg/kg	0.2		< RL
Conclusion						Report Only

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter  
 mg/kg = milligram per kilogram

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**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
AP & APEOs	Sample and Report Only			0.4	0.4	0.4	0.4

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**8. Anti-Microbials & Biocides**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
o-Phenylphenol (+Salts)	90-43-7	MS_0023187_en 2020 -09 modified	µg/L	100	100	< RL
Triclosan	3380-34-5	US EPA 8270E	µg/L	100	100	< RL
Permethrin	Multiple	US EPA 8270E	µg/L	500	500	< RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL = reporting limit  
 µg/L = microgram per liter

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**9.Chlorinated Paraffins**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	US EPA 3510, ISO 18219-2	µg/L	5	500	< RL
Short-chain Chlorinated paraffins (SCCPs) (C10-C13)	85535-84-8	US EPA 3510, ISO 18219-1	µg/L	5	25	< RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL =reporting limit  
 µg/L = microgram per liter

**10.Chlorobenzenes and Chlorotoluenes**

					Sample No.	R001
Parameter	Parameter Code	Test Method	Unit	RL	ZDHC Limit	Result
1,2-Dichlorobenzene	95-50-1	GB/T 20384-2006 modified	µg/L	0.2	0.2	< RL
Other isomers of mono, di-, tri-, tetra-, penta- and hexa- Chlorobenzene and mono, di- tri-, tetra- and penta-Chlorotoluene	Multiple	GB/T 20384-2006 modified	µg/L	0.2	0.2	< RL
Conclusion						Comply

					Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	ZDHC Limit	Result
mono, di- tri-, tetra- and penta-Chlorotoluene	Multiple	HJ 605	mg/kg	0.1		< RL
Conclusion						Report Only

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter  
 mg/kg = milligram per kilogram

**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
mono, di- tri-, tetra- and penta-Chlorotoluene	Sample and Report only			0.2	0.2	0.2	0.2

**11.Chlorophenols**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
2-Chlorophenol	95-57-8	US EPA 8270E	µg/L	0.5	0.5	< RL
3-chlorophenol	108-43-0	US EPA 8270E	µg/L	0.5	0.5	< RL
4-chlorophenol	106-48-9	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3-Dichlorophenol	576-24-9	US EPA 8270E	µg/L	0.5	0.5	< RL
2,4-Dichlorophenol	120-83-2	US EPA 8270E	µg/L	0.5	0.5	< RL
2,5-Dichlorophenol	583-78-8	US EPA 8270E	µg/L	0.5	0.5	< RL
2,6-Dichlorophenol	87-65-0	US EPA 8270E	µg/L	0.5	0.5	< RL
3,4-Dichlorophenol	95-77-2	US EPA 8270E	µg/L	0.5	0.5	< RL
3,5- Dichlorophenol	591-35-5	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,4-Trichlorophenol	15950-66-0	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,5-Trichlorophenol	933-78-8	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,6-Trichlorophenol	933-75-5	US EPA 8270E	µg/L	0.5	0.5	< RL
2,4,5-Trichlorophenol	95-95-4	US EPA 8270E	µg/L	0.5	0.5	< RL
2,4,6-Trichlorophenol	88-06-2	US EPA 8270E	µg/L	0.5	0.5	< RL
3,4,5-Trichlorophenol	609-19-8	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,4,5-Tetrachlorophenol	4901-51-3	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,4,6-Tetrachlorophenol	58-90-2	US EPA 8270E	µg/L	0.5	0.5	< RL
2,3,5,6-Tetrachlorophenol	935-95-5	US EPA 8270E	µg/L	0.5	0.5	< RL
Pentachlorophenol	87-86-5	US EPA 8270E	µg/L	0.5	0.5	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter



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**12. Dimethyl Formamide (DMFa)**

					Sample No.	R001
Parameter	Parameter Code	Test Method	Unit	RL	ZDHC Limit	Result
Dimethyl formamide (DMFa) *	68-12-2	US EPA 8215, 8270E	µg/L	1000	1000	< RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL = reporting limit  
 µg/L = microgram per liter

**Remark:**

\* Sample and Report only for mock leather

**13.Dyes - Carcinogenic or Equivalent Concern**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
C.I. Direct Black 38	1937-37-7	ISO 16373	µg/L	500	500	< RL
C.I. Direct Blue 6	2602-46-2	ISO 16373	µg/L	500	500	< RL
C.I. Acid Red 26	3761-53-3	ISO 16373	µg/L	500	500	< RL
C.I. Basic Red 9	569-61-9	ISO 16373	µg/L	500	500	< RL
C.I. Direct Red 28	573-58-0	ISO 16373	µg/L	500	500	< RL
C.I. Basic Violet 14	632-99-5	ISO 16373	µg/L	500	500	< RL
C.I. Disperse Blue 1	2475-45-8	ISO 16373	µg/L	500	500	< RL
C.I. Disperse Blue 3	2475-46-9	ISO 16373	µg/L	500	500	< RL
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	ISO 16373	µg/L	500	500	< RL
C.I Basic Green 4 (malachite green chloride)	569-64-2	ISO 16373	µg/L	500	500	< RL
C.I Basic Green 4 (malachite green oxalate)	2437-29-8	ISO 16373	µg/L	500	500	< RL
C.I Basic Green 4 (malachite green)	10309-95-2	ISO 16373	µg/L	500	500	< RL
Disperse Orange 11	82-28-0	ISO 16373	µg/L	500	500	< RL
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	ISO 16373	µg/L	500	500	< RL
C.I. Acid Violet 49	1694-09-3	ISO 16373	µg/L	500	500	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**14.Dyes - Disperse (Sensitizing)**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Disperse Yellow 1	119-15-3	ISO 16373	µg/L	50	50	< RL
Disperse Blue 102	12222-97-8	ISO 16373	µg/L	50	50	< RL
Disperse Blue 106	12223-01-7	ISO 16373	µg/L	50	50	< RL
Disperse Yellow 39	12236-29-2	ISO 16373	µg/L	50	50	< RL
Disperse Orange 37/59/76	13301-61-6	ISO 16373	µg/L	50	50	< RL
Disperse Brown 1	23355-64-8	ISO 16373	µg/L	50	50	< RL
Disperse Orange 1	2581-69-3	ISO 16373	µg/L	50	50	< RL
Disperse Yellow 3	2832-40-8	ISO 16373	µg/L	50	50	< RL
Disperse Red 11	2872-48-2	ISO 16373	µg/L	50	50	< RL
Disperse Red 1	2872-52-8	ISO 16373	µg/L	50	50	< RL
Disperse Red 17	3179-89-3	ISO 16373	µg/L	50	50	< RL
Disperse Blue 7	3179-90-6	ISO 16373	µg/L	50	50	< RL
Disperse Blue 26	3860-63-7	ISO 16373	µg/L	50	50	< RL
Disperse Yellow 49	54824-37-2	ISO 16373	µg/L	50	50	< RL
Disperse Blue 35	12222-75-2	ISO 16373	µg/L	50	50	< RL
Disperse Blue 124	61951-51-7	ISO 16373	µg/L	50	50	< RL
Disperse Yellow 9	6373-73-5	ISO 16373	µg/L	50	50	< RL
Disperse Orange 3	730-40-5	ISO 16373	µg/L	50	50	< RL
Disperse Blue 35	56524-77-7	ISO 16373	µg/L	50	50	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

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**15.Dyes - Navy Blue Colorant**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	ISO 16373	µg/L	500	500	< RL
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	ISO 16373	µg/L	500	500	< RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL = reporting limit  
 µg/L = microgram per liter

## 16.Flame Retardants

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001 Result
				RL	ZDHC Limit	
Tris-(2-chloro-ethyl)-phosphate (TCEP)	115-96-8	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Decabromodiphenyl ether (DecaBDE)	1163-19-5	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tri-(2,3-di-bromo-propyl)-phosphate (TRIS)	126-72-7	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Octabromodiphenyl ether (OctaBDE)	32536-52-0	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Bis-(2,3-di-bromo-propyl)-phosphate (BIS)	5412-25-9	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tris(1-aziridinyl)phosphine oxide) (TEPA)	545-55-1	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Polybromobiphenyls (PBB)	59536-65-1	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tetra-bromo-bisphenol-A (TBBPA)	79-94-7	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Hexabromocyclododecane(HBCDD)	3194-55-6	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tris-(1,3-di-chloro-isopropyl)-phosphate (TDCP)	13674-87-8	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Decabromobiphenyl (DecaBB)	13654-09-6	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Dibromobiphenyls (DiBB)	Multiple	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Octabromobiphenyls (OctaBB)	Multiple	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tetrabromobisphenol A bis(dibromopropyl ether)	21850-44-2	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Hexabromodiphenyl ether (hexaBDE)	36483-60-0	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Monobromobiphenyls (MonoBB)	Multiple	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Monobromodiphenylethers Multiple (MonoBDEs)	Multiple	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Nonabromobiphenyls (NonaBB)	Multiple	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	US EPA 8270, ISO 22032, US EPA 527,US EPA 8321B	µg/L	5	25	< RL

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Tribromodiphenylethers (TriBDEs)	Multiple	US EPA 8270, ISO 22032, US EPA 527, US EPA 8321B	µg/L	5	25	< RL
Boric acid *	10043-35-3; 11113-50-1	EPA 6020a	µg/L	20	100	< RL
Diboron trioxide *	1303-86-2	EPA 6020a	µg/L	20	100	< RL
Disodium octaborate *	12008-41-2	EPA 6020a	µg/L	20	100	< RL
Disodium tetraborate anhydrous *	1303-96-4; 1330-43-4	EPA 6020a	µg/L	20	100	< RL
Tetraboron disodium heptaoxide, hydrate *	12267-73-1	EPA 6020a	µg/L	20	100	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**Remark:**

- \* Borate salts are determined as total boron via ICP. Limit refers to boron, not the salt.

**17.Glycols / Glycol Ethers**

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001
				RL	ZDHC Limit	Result
Bis(2-methylethyl)ether	111-96-6	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
2-Ethoxyethanol	110-80-5	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
2-Ethoxyethyl acetate	111-15-9	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
Ethylene glycol dimethyl ether	110-71-4	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
2-Methoxyethanol	109-86-4	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
2-Methoxyethyl acetate	110-49-6	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
2-Methoxypropyl acetate	70657-70-4	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
Triethylene glycol dimethyl ether	112-49-2	EN 71-9:2005+A1:2007; EN 71-10 and -11:2005 modified	µg/L	50	50	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

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**18.Halogenated Solvents**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
1,2-dichloroethane	107-06-2	US EPA 8260D	µg/L	1	1	< RL
Methylene chloride	75-09-2	US EPA 8260D	µg/L	1	1	< RL
Trichloroethylene	79-01-6	US EPA 8260D	µg/L	1	1	< RL
Tetrachloroethylene	127-18-4	US EPA 8260D	µg/L	1	1	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter



**19.Organotin Compounds**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Mono-,di-and tri-methyltin derivatives	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Mono-,di-and tri-butyltin derivatives	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Mono-,di-and tri-phenyltin derivatives	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Mono-,di-and tri-octyltin derivatives	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Dipropyltin compounds (DPT)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Tetrabutyltin compounds (TeBT)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Tripropyltin Compounds (TPT)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Tetraoctyltin compounds (TeOT)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Tricyclohexyltin (TCyHT)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Tetraethyltin Compounds (TeET)	Multiple	ISO 17353	µg/L	0.01	0.01	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

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**20.Other / Miscellaneous Chemicals**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	GB 31604.10-2016 modified	µg/L	500	500	< RL
Bisphenol A	80-05-7	GB 31604.10-2016 modified	µg/L	10	10	< RL
Thiourea	62-56-6	GB 31604.10-2016 modified	µg/L	50	50	< RL
Quinoline	91-22-5	GB 31604.10-2016 modified	µg/L	50	50	< RL
Borate, zinc salt *	12767-90-7	EPA 6020a	µg/L	50	100	B <RL; Zn <RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL = reporting limit  
 µg/L = microgram per liter

**Remark:**

- \* Borate, zinc salt is determined as total boron and total zinc via ICP. Limit refers to boron and zinc individually, not the salt.

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**21. Perfluorinated and Polyfluorinated Chemicals (PFCs)**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Perfluorooctane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	Multiple	EPA 8270, PFCs: LC-MS-MS FTOH: GC-MS	µg/L	0.01	0.01	< RL
Perfluorooctanoic acid (PFOA) related substances	Multiple	EPA 8270, PFCs: LC-MS-MS FTOH: GC-MS	µg/L	1	1	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**22. Phthalates - Including all other esters of phthalic acid**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Di(ethylhexyl) phthalate (DEHP)	117-81-7	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Bis(2-methoxyethyl) phthalate(DMEP)	117-82-8	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-n-octyl phthalate (DNOP)	117-84-0	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-iso-decyl phthalate (DIDP)	26761-40-0	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-Isononyl Phthalate (DINP)	28553-12-0	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-n-hexyl phthalate (DnHP)	84-75-3	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-n-butyl phthalate (DBP)	84-74-2	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Butyl benzyl phthalate (BBP)	85-68-7	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Dinonyl phthalate (DNP)	84-76-4	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Diethyl phthalate (DEP)	84-66-2	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-n-propyl phthalate (DPRP)	131-16-8	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-isobutyl phthalate (DIBP)	84-69-5	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-cyclohexyl phthalate (DCHP)	84-61-7	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-iso-octyl phthalate (DIOP)	27554-26-3	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4; 68515-50-4	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6; 84777-06-0	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Di-n-pentylphthalates	131-18-0	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Diisopentylphthalates	605-50-5	US EPA 8270E, ISO 18856	µg/L	10	10	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**23.Polycyclic Aromatic Hydrocarbons (PAHs)**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Benzo(a)pyrene	50-32-8	US EPA 8270E	µg/L	1	1	< RL
Anthracene	120-12-7	US EPA 8270E	µg/L	1	1	< RL
Pyrene	129-00-0	US EPA 8270E	µg/L	1	1	< RL
Benzo[ghi]perylene	191-24-2	US EPA 8270E	µg/L	1	1	< RL
Benzo(e)pyrene	192-97-2	US EPA 8270E	µg/L	1	1	< RL
Indeno[1,2,3-cd]pyrene	193-39-5	US EPA 8270E	µg/L	1	1	< RL
Benzo(j)fluoranthene	205-82-3	US EPA 8270E	µg/L	1	1	< RL
Benzo[b]fluoranthene	205-99-2	US EPA 8270E	µg/L	1	1	< RL
Fluoranthene	206-44-0	US EPA 8270E	µg/L	1	1	< RL
Benzo[k]fluoranthene	207-08-9	US EPA 8270E	µg/L	1	1	< RL
Acenaphthylene	208-96-8	US EPA 8270E	µg/L	1	1	< RL
Chrysene	218-01-9	US EPA 8270E	µg/L	1	1	< RL
Dibenz(a,h)anthracene	53-70-3	US EPA 8270E	µg/L	1	1	< RL
Benzo[a]anthracene	56-55-3	US EPA 8270E	µg/L	1	1	< RL
Acenaphthene	83-32-9	US EPA 8270E	µg/L	1	1	< RL
Phenanthrene	85-01-8	US EPA 8270E	µg/L	1	1	< RL
Fluorene	86-73-7	US EPA 8270E	µg/L	1	1	< RL
Naphthalene	91-20-3	US EPA 8270E	µg/L	1	1	< RL
Conclusion						Comply

Parameter	Parameter Code	Test Method	Sample No.		S001
			Unit	RL	Result
Benzo(a)pyrene	50-32-8	HJ 805-2016	mg/kg	0.2	< RL
Anthracene	120-12-7	HJ 805-2016	mg/kg	0.2	12.1
Pyrene	129-00-0	HJ 805-2016	mg/kg	0.2	< RL
Benzo[ghi]perylene	191-24-2	HJ 805-2016	mg/kg	0.2	< RL
Benzo(e)pyrene	192-97-2	HJ 805-2016	mg/kg	0.2	< RL
Indeno[1,2,3-cd]pyrene	193-39-5	HJ 805-2016	mg/kg	0.2	< RL
Benzo(j)fluoranthene	205-82-3	HJ 805-2016	mg/kg	0.2	< RL
Benzo[b]fluoranthene	205-99-2	HJ 805-2016	mg/kg	0.2	< RL
Fluoranthene	206-44-0	HJ 805-2016	mg/kg	0.2	< RL
Benzo[k]fluoranthene	207-08-9	HJ 805-2016	mg/kg	0.2	< RL
Acenaphthylene	208-96-8	HJ 805-2016	mg/kg	0.2	< RL
Chrysene	218-01-9	HJ 805-2016	mg/kg	0.2	< RL
Dibenz(a,h)anthracene	53-70-3	HJ 805-2016	mg/kg	0.2	< RL
Benzo[a]anthracene	56-55-3	HJ 805-2016	mg/kg	0.2	< RL
Acenaphthene	83-32-9	HJ 805-2016	mg/kg	0.2	< RL
Phenanthrene	85-01-8	HJ 805-2016	mg/kg	0.2	< RL
Fluorene	86-73-7	HJ 805-2016	mg/kg	0.2	< RL
Naphthalene	91-20-3	HJ 805-2016	mg/kg	0.2	< RL
Conclusion					Report Only

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter  
 mg/kg = milligram per kilogram

**Remark:**

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
Sludge Type							
PAHs	Sample and Report only			0.2	0.2	0.2	0.2

## 24.Restricted Aromatic Amines(Cleavable from Azo)

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4,4'-diaminodiphenylmethane	101-77-9	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4,4'-oxydianiline	101-80-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-chloroaniline	106-47-8	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
3,3'-Dimethoxybenzidine	119-90-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
3,3'-Dimethylbenzidine	119-93-7	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
6-Methoxy-m-toluidine	120-71-8	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2,4,5-trimethylaniline	137-17-7	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4,4'-Thiodianiline	139-65-1	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-aminoazobenzene	60-09-03	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL

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4-methoxy-m-phenylenediamine	615-05-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4,4'-Methylenedi-o-toluidine	838-88-0	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2,6-xylydine	87-62-7	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
o-anisidine	90-04-0	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2-naphthylamine	91-59-8	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
3,3'-Dichlorobenzidine	91-94-1	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-Aminobiphenyl	92-67-1	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
benzidine	92-87-5	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
o-toluidine	95-53-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2,4-xylydine	95-68-1	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-chloro-o-toluidine	95-69-2	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL



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4-methyl-m-phenylenediamine	95-80-7	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
o-Aminoazotoluene	97-56-3	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
5-nitro-o-toluidine	99-55-8	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-chloro-o-toluidinium chloride	3165-93-3	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2-Naphthylammonium acetate	553-00-4	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
4-methoxy-m-phenylene diammonium sulphate	39156-41-7	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
2,4,5-trimethylaniline hydrochloride	21436-97-5	Reduction, EPA 8270 and ISO 14362-1 and ISO 14362-3 (if needed) GC/MS and LC/ MS/MS	µg/L	0.1	0.1	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**25.UV Absorbers**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	US EPA 8270, ISO 22032, US EPA 527, US EPA 8321B	µg/L	100	100	< RL
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	US EPA 8270, ISO 22032, US EPA 527, US EPA 8321B	µg/L	100	100	< RL
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	US EPA 8270, ISO 22032, US EPA 527, US EPA 8321B	µg/L	100	100	< RL
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	US EPA 8270, ISO 22032, US EPA 527, US EPA 8321B	µg/L	100	100	< RL
Conclusion						Comply

**Abbreviation:** < = less than  
 RL = reporting limit  
 µg/L = microgram per liter

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**26.Volatile Organic Compounds (VOC)**

Parameter	Parameter Code	Test Method	Unit	RL	Sample No.	R001
					ZDHC Limit	Result
Benzene	71-43-2	ISO 11423-1	µg/L	1	1	< RL
Xylene	1330-20-7	ISO 11423-1	µg/L	1	1	< RL
o-cresol	95-48-7	ISO 11423-1	µg/L	1	1	< RL
p-cresol	106-44-5	ISO 11423-1	µg/L	1	1	< RL
m-cresol	108-39-4	ISO 11423-1	µg/L	1	1	< RL
Toluene*	108-88-3	ISO 11423-1	µg/L	1	1	< RL
Conclusion						Comply

**Abbreviation:** < =less than  
 RL =reporting limit  
 µg/L = microgram per liter

**Remark:**

\* Sample and report only for mock leather

## Wastewater Sampling Report for ZDHC WWG

### ZDHC WWG 废水采样报告

ZDHC Wastewater Guidelines Version 2.1 (Nov. 2022)

ZDHC Wastewater and Sludge SAP Version 2.1 (Nov. 2022)

Client 客户:	_____
Buyer's Name 买家名称:	-
Test item(s) 测试项目:	ZDHC Wastewater
Factory Name 工厂名称:	湖南杰新纺织印染有限公司
Factory Address 工厂地址:	Hunan Jiexin Textile Printing and Dyeing Co., Ltd. 中国湖南省常德经济技术开发区尚德路 18 号
Discharge Type of Wastewater: 废水排放类型	No.18 Shangde Road Economic and Technological Development, ZoneChangdeHunan China Indirect discharge 间接排放
On-site ETP 在线废水处理装置	Yes 是
Sampling Date 采样日期:	2024 年 7 月 5 日
Sampling Location 采样点:	Incoming water (进水) Discharged Wastewater (排放废水) Raw Wastewater (原废水) Sludge (污泥) (Ref to the location map attached 参考采样点地图)
Sampling Person 采样人员:	Jimmy Zhang / 18823432453
ZDHC Sampler Accreditation Certification Number 采样员证书编号:	C74D106819958
TUV Sales 莱茵销售支持:	Jessica Zeng 134 1619 3338
Sampling Field Contact: 采样现场联系方式	Name (联系人): 宋爱民 Phone (电话): 13607362291

Order No. 项目编号 : 326034682 (Sampling Report)

## Sampling Preparation Checklist 采样准备检查表

Checked By 审核人: Jimmy Zhang Date 日期: 2024.7.5

Equipment list 设备列表	Check 核查	Equipment list 设备列表	Check 核查
<b>Sampling equipment 采样设备</b>		Buffer 缓冲液	N
Sampling rod 采样杆	Y	pH meter pH 计	Y
Depth sampler with temperature meter 带温度计取样器	Y	Temperature meter 温度计	Y
Disposable gloves 一次性手套	Y	DO meter 溶氧仪	N
2L amber glass bottle 2L 棕色玻璃瓶	Y	Total Chloride meter 总氯测试仪	N
1L amber glass bottle 1L 棕色玻璃瓶	Y	<b>Quality control samples 质控样</b>	
100mL amber glass bottle 100mL 棕色玻璃瓶	Y	Field blanks 现场空白	Y
500mL amber glass bottle 500mL 棕色玻璃瓶	Y	Transport/equipment blanks 运输/设备空白	Y
250mL amber glass bottle 250mL 棕色玻璃瓶	Y	<b>Sample storage and transport 样品储存和运输</b>	
100ml PE bottle 100mL 聚乙烯瓶	Y	Blue Ice 蓝冰	Y
500mL PE bottle 500mL 聚乙烯瓶	Y	Packing material 包装材料	Y
40mL amber VOA vial 40mL 棕色 VOA 小瓶	Y	Container 样品存放容器	Y
Aseptic bag 无菌袋	N	<b>Safety equipment 安全装备</b>	
PE bag 聚乙烯袋	N	First-aid kit 急救箱	N
Labels for samples 样品标签	Y	Drinking water 饮用水	N
<b>Chemical and measurement equipment 化学试剂及测量设备</b>		Mobile phone/communication equipment 手机/通信设备	N
Nitric acid 硝酸	N	PPE-wide brimmed has wet weather gear waders/rubber boots disposable overalls 个人防护设备-高筒防水胶靴/一 次性工装连体橡胶靴	N
Sulfuric acid 硫酸	N	Antiseptic hand wash 杀菌洗手液	N
HCl 盐酸	N	Lifejackets/EPIRB 救生衣/应急无线电子示位标	N
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 硫代硫酸钠	N	<b>Others 其他</b>	
2M zinc acetate 2M 乙酸锌	N	Tools-spanner/shifter.etc 工具-扳手/移动装置等	N
1M NaOH 1M 氢氧化钠溶液	N	Digital camera and batteries/charger 数码相机和电池/充电器	N

**Order No. 项目编号 : 326034682 (Sampling Report)**

## Basic Information in Sampling Fields 采样基本信息

Production lines 生产线 (编号)	Operation state 运行状态	Note 说明
印染车间	正常运行	无

Wastewater treatment plant 污水处理设施 (编号)	Operation state 运行状态	Quantity of wastewater effluent 污水排放量 (m <sup>3</sup> /day)	Note 说明
DW001	正常运行	3,000	无

Flowrate and Type of Discharge 排放量及排放类型	Flowrate 排放量: <input type="checkbox"/> Direct Discharge 直接排放 <input checked="" type="checkbox"/> Indirect Discharge with WWTP 间接排放+有污水处理装置 <input type="checkbox"/> Indirect Discharge without WWTP 间接排放+无污水处理装置 <input type="checkbox"/> Zero Liquid Discharge 零排放	Confirmed by Sampling team <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Discharge standard of the factory 企业排放标准	纺织染整工业水污染物排放标准 GB 4287-2012 纺织染整工业水污染物排放标准 GB 4287-2012/	
Facility Type 工厂类型	<input type="checkbox"/> Is the polyester wet processing facilities? 是涤纶湿法加工厂吗?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	<input type="checkbox"/> Is the PU processing facilities? 是 PU 加工厂吗?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Suldge disposal pathway 污泥处理方式	<input checked="" type="checkbox"/> A - Offsite Incineration at >1000°C 大于 1000°C 场外焚烧 <input type="checkbox"/> B - Landfill with Significant Control Measures 重大控制措施的垃圾填埋场 <input type="checkbox"/> C - Building Products Processed at >1000 °C 大于 1000°C 下加工的建筑产品 <input type="checkbox"/> D - Landfill with Limited Control Measures 采取有限控制措施的垃圾填埋场 <input type="checkbox"/> E - Offsite Incineration and Building Products Processed at <1000°C 小于 1000°C 场外焚烧和加工的建筑产品 <input type="checkbox"/> F - Landfills with No Control Measures 没有控制措施的垃圾填埋场 <input type="checkbox"/> G - Land Application 土地应用	N/A

Sampling day weather 采样天气状况:	<input checked="" type="checkbox"/> sunny 晴 <input type="checkbox"/> rainy 雨 <input type="checkbox"/> cloudy 多云 <input type="checkbox"/> others 其他
Sampling mode 采样方式:	<input checked="" type="checkbox"/> discrete 瞬时 <input checked="" type="checkbox"/> composite 混合 <input type="checkbox"/> others 其他
Sampling day temperature 采样气温:	32°C
Distance from TUV to sampling place 采样点距离莱茵距离:	1,174 km

**Order No. 项目编号 : 326034682 (Sampling Report)**
**Sampling Location (采样点): Incoming water (进水)**

Sampling Team (采样组)	Jimmy Zhang	
Sampling time (采样时间)	09:30	
Sample description in field (样品描述)	Colour (颜色)	无
	Odor (气味)	无
	Turbidity (浑浊)	无
	Oil slick (浮油)	无

**Test Item In Lab (实验室测试项目):**

Test item 采样项目	Lab No. 标签号	Bottle type and size 样品瓶规格	Treatment 现场处理情况	Multiple sampling (Y/N)	Note 备注
AP/APEO, Anti- Microbials & Biocides, Chlorinated Parafins, Chlorophenols, COC, DMFa, Dyes, Flame retardant, Glycols, Organotin, Phthalates, PAHs, AZO, UV Absorbers, Other chemicals 烷基酚/烷基酚聚氧乙烯醚, 抗菌剂, 氯化石蜡, 氯化苯酚, 氯苯和氯甲苯, N,N-二甲酰胺, 染料, 阻燃剂, 乙二醇, 有机锡, 邻苯, 多环芳烃, 偶氮染料, 紫外吸收剂, 其他化学物质	I001	2L amber glass bottle 2L 棕色玻璃瓶	-	N	
PFCs 全氟化物	I002	1L PE bottle 1L 聚乙烯瓶	Filling without air in bottle 满瓶不留空气	N	
Halogenated Solvent/ VOCs 卤化溶剂、挥发性有机物	I003	3*40mL amber VOA vial no head-space 3个40mL棕色VOA小瓶	Acidify to pH < 2 with hydrochloric acid, filling without air in bottle. 加盐酸调节水样pH小于2, 满瓶不留空气	N	
Field blank of Halogenated Solvent/ VOCs 卤化溶剂、挥发性有机物现场空白	I103B	3*40mL amber VOA vial no head-space 40mL棕色VOA小瓶	Filling with Grade 1 water, acidify to pH < 2 with hydrochloric acid, filling without air in bottle. 用一级水装满, 加盐酸调节水样pH小于2, 满瓶不留空气	-	Only open the cap when sampling on site, no sampling required 现场采样时打开瓶盖即可, 不需要采样
Heavy metals 重金属	I004	1L PE bottle 1L 聚乙烯瓶	Acidify to pH < 2 with nitric acid 加硝酸调节水样 pH 小于 2	N	

**Order No. 项目编号 : 326034682 (Sampling Report)**

Test item 采样项目	Lab No. 标签号	Bottle type and size 样品瓶规格	Treatment 现场处理情况	Multiple sampling (Y/N)	Note 备注
Field blank of Mercury 汞现场空白	I104B	100mL PE bottle 100mL 聚乙烯瓶	Filling with Grade 1 water and Acidify to pH < 2 with nitric acid 装入一级水, 加硝酸调节水样pH小于2	-	Only open the cap when sampling on site, no sampling required 现场采样时打开瓶盖即可, 不需要采样
Cr VI 六价铬	I005	3*40mL amber brown glass VOA vial 3个40mL棕色玻璃VOA小瓶	0.45 um filter in field, add buffer* to pH 9.0-9.5 现场过 0.45um 微膜, 加缓冲液调节水样 pH 至 9.0-9.5	N	
Temperature indicator bottle 温度指示瓶	-	500mL amber glass bottle 500mL棕色玻璃瓶	-	-	

Remark: # Buffer = EPA Method 218.6. Dissolve 33 g of ammonium sulphate in 75 ml of ASTM D1103 Type 1 or ISO 3696 water, add 6.5 ml of ammonium hydroxide. Dilute to 100 ml with ASTM D1103 Type 1 or ISO 3696 water.



**Order No. 项目编号 : 326034682 (Sampling Report)**
**Sampling Location (采样点): Discharged Wastewater (排放废水)**

Sampling Team (采样组)		Jimmy Zhang							
Sampling time (采样时间)		1	2	3	4	5	6	7	Ave
		10:00	11:00	12:00	13:00	14:00	15:00	16:00	-
Velocity 流速(m <sup>3</sup> /min)		2.12	2.10	2.12	2.08	2.08	2.12	2.10	2.1
Sample description in field (样品描述)	Colour (颜色)	淡黄色							
	Odor (气味)	无							
	Turbidity (浑浊)	无							
	Oil slick (浮油)	无							

<sup>Δ</sup> Use incoming water temperature as receiver body temperature if no receiver body can be found

**Test Item In Lab (实验室测试项目):**

Test item 采样项目	Lab No. 标签号	Bottle type and size 样品瓶规格	Treatment 现场处理情况	Multiple sampling (Y/N)	Note 备注
Heavy metals 重金属	D104	1L PE bottle 1L聚乙烯瓶	Acidify to pH< 2 with nitric acid 加硝酸调节水样 pH 小于 2	Y	
Field blank of Mercury 汞现场空白	D104B	100mL PE bottle 100mL 聚乙烯瓶	Filling with Grade 1 Water, Acidify to pH < 2 with nitric acid 填入一级水, 加硝酸调节水样 pH 小于 2	-	Only open the cap when sampling on site, no sampling required 现场采样时打开瓶盖即可, 不需要采样
Cr VI 六价铬	D105	3*40mL amber brown glass VOA vial 3个40mL棕色玻璃VOA小瓶	0.45 um filter in field, add buffer* to pH 9.0-9.5 现场过 0.45um 微膜, 加缓冲液调节水样 pH 至 9.0-9.5	Y	

**Order No. 项目编号 : 326034682 (Sampling Report)**
**Sampling Location (采样点): Raw Wastewater (原废水)**

Sampling Team (采样组)		Jimmy Zhang						
Sampling time (采样时间)		1	2	3	4	5	6	7
		10:40	11:40	12:40	13:40	14:40	15:40	16:40
Sample description in field (样品描述)	Colour (颜色)	淡黑色						
	Odor (气味)	轻微刺鼻						
	Turbidity (浑浊)	轻微浑浊						
	Oil slick (浮油)	无浮油						

**Test Item In Lab (实验室测试项目):**

Test item 采样项目	Lab No. 标签号	Bottle type and size 样品瓶规格	Treatment 现场处理情况	Multiple sampling (Y/N)	Note 备注
AP/APEO, Anti-Microbials & Biocides, Chlorinated Parafins, Chlorophenols, COC, DMFa, Dyes, Flame retardant, Glycols, Organotin, Phthalates, PAHs, AZO, UV Absorbers, Other chemicals 烷基酚/烷基酚聚氧乙烯醚, 抗菌剂, 氯化石蜡, 氯化苯酚, 氯苯和氯甲苯, N,N-二甲酰胺, 染料, 阻燃剂, 乙二醇, 有机锡, 邻苯, 多环芳烃, 偶氮染料, 紫外吸收剂, 其他化学物质	R201	2L*7 amber glass bottle 2L*7 棕色玻璃瓶	-	Y	
PFCs 全氟化物	R202	1L PE bottle 1L 聚乙烯瓶	Filling without air in bottle 满瓶不留空气	Y	
Halogenated Solvent/ VOCs 卤化溶剂、挥发性有机物	R203	3*40mL amber VOA vial no head-space 3个40mL棕色VOA小瓶	Acidify to pH < 2 with hydrochloric acid, filling without air in bottle. 加盐酸调节水样pH小于2, 满瓶不留空气	Y	
Field blank of Halogenated Solvent/ VOCs 卤化溶剂、挥发性有机物现场空白	R203B	3*40mL amber VOA vial no head-space 40mL棕色VOA小瓶	Acidify to pH < 2 with hydrochloric acid, filling without air in bottle. 加盐酸调节水样pH小于2, 满瓶不留空气	-	Only open the cap when sampling on site, no sampling required 现场采样时打开瓶盖即可, 不需要采样

**Order No. 项目编号 : 326034682 (Sampling Report)**
**Sampling Location (采样点): Sludge (污泥)**

Sampling Team (采样组)	Jimmy Zhang	
Sampling time (采样时间)	11:20	
Sample description in field (样品描述)	Surroundings (周边环境)	自然环境
	Sludge colour (土壤颜色)	黑色
	Sludge type (土壤性状)	<input checked="" type="checkbox"/> solid (固体状) <input type="checkbox"/> liquid (液体状)
	Sludge odor (土壤气味)	无
	Apparent source of pollution (明显污染源)	无

**Test Item In Lab (实验室测试项目):**

Test item 采样项目	Lab No. 标签号	Bottle type and size 样品瓶规格	Treatment 现场处理情况	Multiple sampling (Y/N)	Note 备注
%Solid, Paint Filter Test 固含量, 油漆过滤测试	S301	500ml PE bottle 500ml 聚乙烯瓶	-	N	
Cyanide 氰化物	S302	1L PE bottle 1L 聚乙烯瓶	Adding NaOH to pH >12, adding 0.1mL 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution 用氢氧化钠调节水样 pH 大于 12, 再加 0.1mL 10% 硫代硫酸 酸钠溶液	N	
Feacal Coliform 粪大肠菌群	S303	Aseptic Bags 无菌袋	Adding 0.1mL 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution, keep in the dark 加0.1mL 10% 硫代硫酸钠溶 液, 避光保存	N	
Heavy metals 重金属	S304	1L PE bag 1L PE袋	Acidify to pH < 2 with nitric acid 加硝酸调节水样 pH 小于 2	N	
AP/APEO, COC, PAHs 烷基酚/烷基酚聚氧乙烯 醚、氯甲苯、多环芳烃	S305	1L* 3 PE bag 1L* 3 PE 袋	0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> V/W 加 0.008% (体积重量比) 硫 代硫酸钠溶液袋子	N	

**Sampling Point Indication (Map)**

采样点信息

GPS Data: Discharged Wastewater: 28.937687, 111.750051  
Raw Wastewater: 28.937142, 111.750092  
Incoming water: 28.937970, 111.750214  
Sludge: 28.937967, 111.750236

废水为非直接排放

下游的集中污水处理厂名称为：常德清蓝水务有限公司  
地址为：湖南常德经开区樟木桥街道五一村新包垸 11 组。

实际采样工厂的 GPS 卫星定位地图：



Order No. 项目编号 : 326034682 (Sampling Report)

Factory Gate  
工厂大门



经度: 111.752604  
纬度: 28.937453  
地址: 湖南省常德市鼎城区民建路40号湖南  
新纺织印染有限公司  
时间: 2024-07-05 11:34:09  
海拔: 34.00米  
天气: 90% 西南风

Factory Layout  
工厂排污平面图



Other Factory Photo  
其它工厂图片-内部环境



Other Factory Photo  
其它工厂图片-内部环境

Other Factory Photo  
其它工厂图片-内部环境



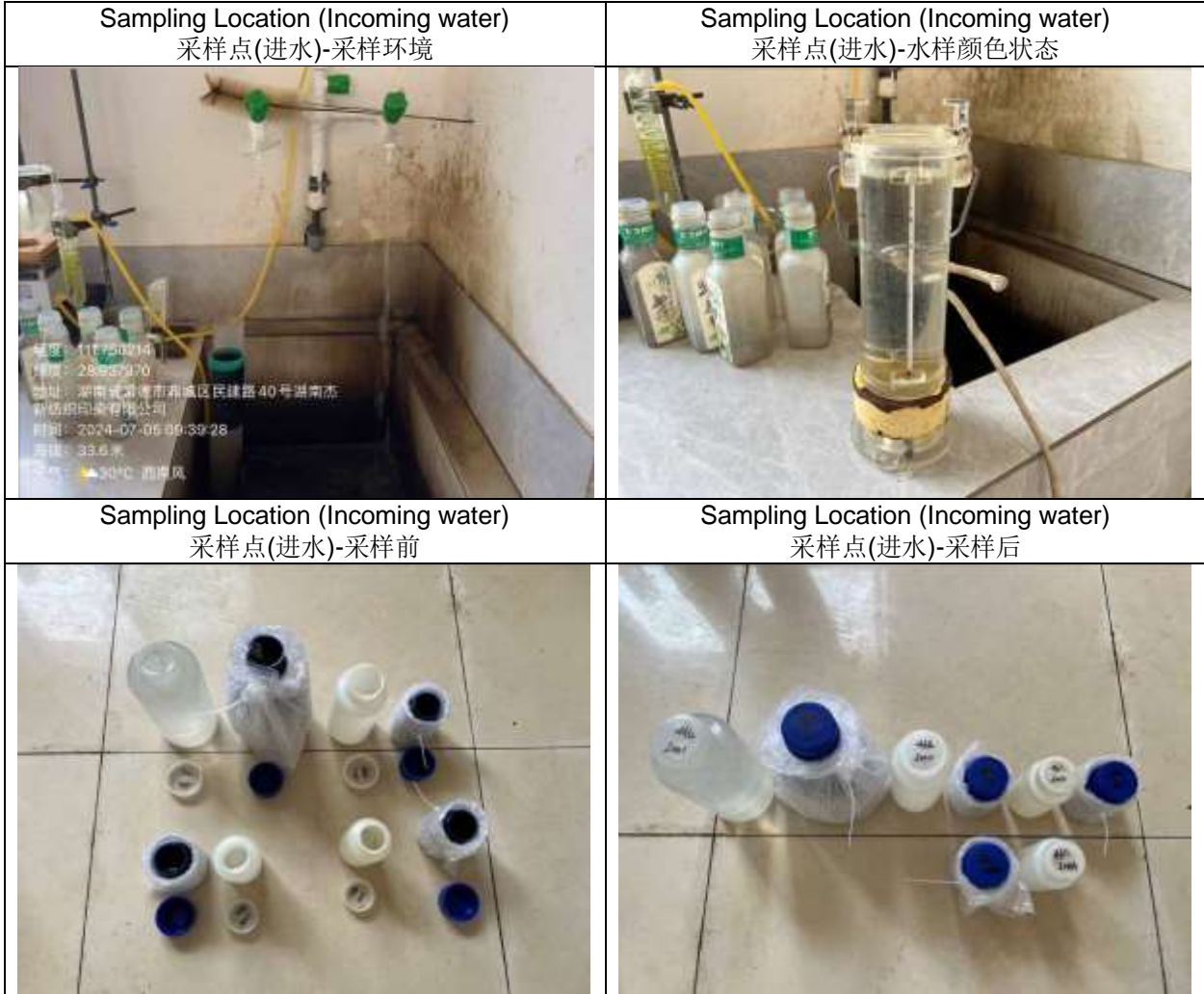
Other Factory Photo  
其它工厂图片-内部环境







Order No. 项目编号 : 326034682 (Sampling Report)

**Sampling Photo**





采样点照片



Order No. 项目编号 : 326034682 (Sampling Report)

<p>Sampling Location (Discharged Wastewater) 采样点(排放废水)-采样环境</p>	<p>Sampling Location (Raw Wastewater) 采样点(排放废水) -水样颜色状态</p>
	
<p>Sampling Location (Discharged Wastewater) 采样点(排放废水)- 采样前</p>	<p>Sampling Location (Discharged Wastewater) 采样点(排放废水) -采样后</p>
	

Order No. 项目编号 : 326034682 (Sampling Report)

<p>Sampling Location (Raw Wastewater) 采样点(原废水) - 采样环境</p>	<p>Sampling Location (Raw Wastewater) 采样点(原废水) - 水样颜色状态</p>
	
<p>Sampling Location (Raw Wastewater) 采样点(原废水) - 采样前</p>	<p>Sampling Location (Raw Wastewater) 采样点(原废水) - 采样后</p>
	



Order No. 项目编号 : 326034682 (Sampling Report)

<p>Sampling Location (Sludge) 采样点(污泥) - 采样环境</p>	<p>Sampling Location (Sludge) 采样点(污泥) - 污泥状态颜色</p>
 <p>经度: 111.750236 纬度: 28.937967 地址: 湖南省常德市鼎城区民权路40号湖南杰新纺织印染有限公司 时间: 2024-07-05 11:04:46 海拔: 33.7米 天气: 30°C 西南风</p>	
<p>Sampling Location (Sludge) 采样点(污泥) - 采样前</p>	<p>Sampling Location (Sludge) 采样点(污泥) - 采样后</p>
	

Order No. 项目编号 : 326034682 (Sampling Report)

样品打包前



样品打包前



样品打包前



样品打包前



封口贴纸



样品打包后



**Order No. 项目编号 : 326034682 (Sampling Report)**

寄样地址	快递单号
	

 Sampler and ZDHC Accredited no.  
 采样员及 ZDHC 认证编号:

 Jimmy Zhang  
 C74D106819958

Date 日期: 05 July 2024

Checked By 审核人:

 Robin Hong  
 Project Manager

Date 日期: 08 July 2024

 Signature and stamp by Factory  
 工厂人员签名及盖章:



Date 日期: 05 July 2024

Sample storage conditions 样品保存条件	<input checked="" type="checkbox"/> Refrigeration(0-4°C) <input type="checkbox"/> Frozen 冷冻 <input type="checkbox"/> RT 常温 <input type="checkbox"/> Others 其他				
Sample send temperature/ status/ count 样品送出温度、状态、数量	1 箱 良好 4 度	Sent by 送样人	Jimmy Zhang	Date 日期	05 July 2024
Sample delivery temperature/ status/ count 样品接收温度、状态、数量	4 度 良好 一箱	Received by 接收人	Eric Hu	Date 日期	08 July 2024

 - END -  
 结束

