



Test Report

Number: SHAH0071485301

Applicant: 5110 & 5112
China

Date: 29 Aug, 2016

Factory:
Factory's Name : 5110 & 5112
Address : China

Sample Description:
No. of Sample : 1
Date of Sampling : 12 Aug, 2016

Sample Type:
Sample 1 Wastewater after Treatment, Light Green, Grab Sample at 15:30

Date Received/Date Test Started : 15 Aug, 2016

Tests Conducted:
As Requested by a Brand, for Details Refer to Attached Page(s).

Summary of Test Results:

Test Items	Sample 1
General Chemical Group	D

Note : ND = Not Detected
D = Detected [please specify actual result]

To be continued

Authorized By:

Jasmine Zhang
Deputy General Manager
For Green Initiatives Intertek China



Tests Conducted

Waste Water Effluents Testing

<u>Test Item(s)</u>	<u>Test Method(s)</u>	<u>Unit</u>	<u>Test Result(s)</u>
Biochemical Oxygen Demand after 5 days (BOD ₅)	HJ 505-2009	mg/L	7.1
Chemical Oxygen Demand(COD _{Cr})	GB 11914-1989	mg/L	244
Suspended Substance	GB/T 11901-1989	mg/L	ND (<5)
Solid Residues from Evaporation	GB 11901-1989	mg/L	726
Sulfides	HJ/T 60-2000	mg/L	ND (<0.40)
pH Value	GB/T 6920-1986	--	6.69
Colority	EPA 110.1	ADMI	ND (<25)
Total Phenolics	HJ 503-2009	mg/L	ND (<0.10)
Ca, Mg Hardness	EPA 6010	ppm	90

Remark : ND = Not detected
ppm = parts per million = mg/kg = mg/L



Photo of after Treatment Area



Photo of Sampling Point (after Treatment)

To be continued

Tests Conducted



Photo of Sample

Testing Period: From 15, Aug, 2016 To 26, Aug, 2016

End of report

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Test Report

Number: SHAH0071485302

Applicant: 5110 & 5112
China

Date: 29 Aug, 2016

Factory:
Factory's Name : 5110 & 5112
Address : China

Sample Description:
No. of Sample : 1
Date of Sampling : 12 Aug, 2016

Sample Type:
Sample 1 Wastewater after Treatment, Light Green, Grab Sample at 15:30

Date Received/Date Test Started : 15 Aug, 2016

Tests Conducted:
As Requested by a Brand, for Details Refer to Attached Page(s).

Summary of Test Results:

Test Items	Sample 1
Phthalates (Ortho-Phthalates)	ND
Alkylphenol ethoxylates / Alkylphenols (APEOs/APs)	ND
Perfluorinated Chemicals (PFCs)	ND
Brominated and Chlorinated Flame Retardants	ND
Azo Dyes	ND
Organotin Compounds	ND
Chlorinated Benzenes	D
Chlorinated Solvents	D
Chlorophenols	ND
Short-Chain Chlorinated Paraffins (SCCPs)	ND
Heavy Metals	D

Note : ND = Not Detected
D = Detected [please specify actual result]

To be continued

Authorized By:

Jasmine Zhang
Deputy General Manager
For Green Initiatives Intertek China



Tests Conducted

1 Phthalates (Ortho-Phthalates)

With Reference To EPA 8270 or ISO/DIN Method And By Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	1 µg/L	ND
Butyl benzyl phthalate (BBP)	85-68-7	1 µg/L	ND
Di-n-butyl phthalate (DBP)	84-74-2	1 µg/L	ND
Diethyl phthalate	84-66-2	1 µg/L	ND
Dimethyl phthalate	131-11-3	1 µg/L	ND
Di-n-octyl phthalate (DNOP)	117-84-0	1 µg/L	ND
Di-isononyl phthalate (DINP)	28553-12-0	1 µg/L	ND
Di-iso-decyl phthalate (DIDP)	26761-40-0	1 µg/L	ND
Di-isobutyl phthalate (DIBP)	84-69-5	1 µg/L	ND
Di-n-hexyl phthalate	84-75-3	1 µg/L	ND
Dimethoxyethyl phthalate (DMEP)	117-82-8	1 µg/L	ND
Di-n-propyl phthalate (DPRP)	131-16-8	1 µg/L	ND
Di-iso-octyl phthalate (DIOP)	27554-26-3	1 µg/L	ND
Di-cyclohexyl phthalate (DCHP)	84-61-7	1 µg/L	ND
Dinonyl phthalate (DNP)	84-76-4	1 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted

2 Alkylphenol ethoxylates / Alkylphenols (APEOs/APs)

With Reference To ASTM D7065 And By Gas Chromatography-Mass Spectrometry (GC-MS) And By Liquid Chromatography-Mass Spectrometry (LC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Nonylphenol	104-40-5	1 µg/L	ND
Octylphenol	140-66-9	1 µg/L	ND
Nonylphenol ethoxylates 1+2 (NPEO 1+2)	Multiple	5 µg/L	ND
Octylphenol ethoxylates 1+2 (OPEO 1+2)	Multiple	5 µg/L	ND
Nonylphenol ethoxylates 3-18 (NPEO 3-18)	Multiple	5 µg/L	ND
Octylphenol ethoxylates 3-16 (OPEO 3-16)	Multiple	5 µg/L	ND

Remark: ND = Not detected

3 Perfluorinated Chemicals (PFCs)

By Liquid Chromatography – Mass Spectrometry (LC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Perfluorooctanoic acid (PFOA)	335-67-1	0.01 µg/L	ND
Perfluorooctane sulphonates (PFOS)	2795-39-3	0.01 µg/L	ND
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	0.01 µg/L	ND
Perfluorohexane sulphonates (PFHxS)	355-46-4	0.01 µg/L	ND
Perfluorobutanoic acid (PFBA)	375-22-4	0.01 µg/L	ND
Perfluorobutane sulphonates (PFBS)	375-73-5	0.01 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted

4 Brominated And Chlorinated Flame Retardants

With Reference To EPA 527 (Modified), EPA 8321B And By Liquid Chromatography - Mass Spectrometry (LC-MS) And Gas Chromatography - Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Polybromodiphenyl ethers (PBDEs)	Multiple	0.05 µg/L	ND
Polybromobiphenyls (PBBs)	Multiple	0.05 µg/L	ND
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	0.5 µg/L	ND
Tetrabromobisphenol A (TBBPA)	79-94-7	0.5 µg/L	ND
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	0.05 µg/L	ND
Bis(2,3-dibromopropyl) phosphate	5412-25-9	0.5 µg/L	ND
Hexabromocyclododecane (HBCDD)	3194-55-6	0.5 µg/L	ND
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	0.5 µg/L	ND
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	0.05 µg/L	ND

Remark: ND = Not detected

5 Azo Dyes

With Reference To DIN 38407-16, EN 14362-1/3 (Modified), By Gas Chromatographic - Mass Spectrometric (GC-MS) And High Performance Liquid Chromatographic (HPLC) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
1,4-Phenylenediamine	106-50-3	0.1 µg/L	ND
2,4,5-Trimethylaniline	137-17-7	0.1 µg/L	ND
2,4-Diaminoanisole	615-05-4	0.1 µg/L	ND
2,4-Diaminotoluene	95-80-7	0.1 µg/L	ND
2,4-Xylidine	95-68-1	0.1 µg/L	ND
2,6-Xylidine	87-62-7	0.1 µg/L	ND
2-Chloroaniline	95-51-2	0.1 µg/L	ND
2-Naphthylamine	91-59-8	0.1 µg/L	ND
3,3'-Dichlorobenzidine	91-94-1	0.1 µg/L	ND
3,3'-Dimethoxybenzidine	119-90-4	0.1 µg/L	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	0.1 µg/L	ND
3,3'-Dimethylbenzidine	119-93-7	0.1 µg/L	ND
4,4'-Diaminodiphenylmethane	101-77-9	0.1 µg/L	ND
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	0.1 µg/L	ND
4,4'-Oxydianiline	101-80-4	0.1 µg/L	ND
4,4'-Thiodianiline	139-65-1	0.1 µg/L	ND

To be continued

Tests Conducted

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
4-Aminobiphenyl	92-67-1	0.1 µg/L	ND
4-Chloroaniline	106-47-8	0.1 µg/L	ND
4-Chloro-o-toluidine	95-69-2	0.1 µg/L	ND
5-Nitro-o-anisidine	99-59-2	0.1 µg/L	ND
5-Nitro-o-toluidine	99-55-8	0.1 µg/L	ND
4-Aminoazobenzene	60-09-3	0.1 µg/L	ND
Aniline	62-53-3	0.1 µg/L	ND
Benzidine	92-87-5	0.1 µg/L	ND
m-Toluidine	108-44-1	0.1 µg/L	ND
n,n-Diethylaniline	91-66-7	0.1 µg/L	ND
n-Ethylaniline	103-69-5	0.1 µg/L	ND
n-Methylaniline	100-61-8	0.1 µg/L	ND
o-Aminoazotoluene	97-56-3	0.1 µg/L	ND
o-Anisidine	90-04-0	0.1 µg/L	ND
o-Toluidine	95-53-4	0.1 µg/L	ND
p-Cresidine	120-71-8	0.1 µg/L	ND
p-Toluidine	106-49-0	0.1 µg/L	ND

Remark: ND = Not detected

6 Organotin Compounds

With Reference To ISO 17353:2005 And By Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Monobutyltin	Multiple	0.01 µg/L	ND
Dibutyltin	Multiple	0.01 µg/L	ND
Tributyltin	Multiple	0.01 µg/L	ND
Tetrabutyltin	1461-25-2	0.01 µg/L	ND
Monooctyltin	Multiple	0.01 µg/L	ND
Diocetyl tin	Multiple	0.01 µg/L	ND
Triphenyltin	Multiple	0.01 µg/L	ND
Tricyclohexyltin	Multiple	0.01 µg/L	ND
Triocetyl tin	Multiple	0.01 µg/L	ND
Tripropyltin	Multiple	0.01 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted

7 Chlorinated Benzenes

With Reference To EPA 8260B, EPA 8270D And By Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Chlorobenzene	108-90-7	0.02 µg/L	ND
4-Chlorotoluene	106-43-4	0.02 µg/L	ND
1,2-Dichlorobenzene	95-50-1	0.02 µg/L	ND
1,3-Dichlorobenzene	541-73-1	0.02 µg/L	ND
1,4-Dichlorobenzene	106-46-7	0.02 µg/L	0.08
1,2,4-Trichlorobenzene	120-82-1	0.02 µg/L	ND
1,2,3-Trichlorobenzene	87-61-6	0.02 µg/L	ND
1,3,5-Trichlorobenzene	108-70-3	0.02 µg/L	ND
1,2,3,4-Tetrachlorobenzene	634-66-2	0.02 µg/L	ND
1,2,3,5-Tetrachlorobenzene	634-90-2	0.02 µg/L	ND
1,2,4,5-Tetrachlorobenzene	95-94-3	0.02 µg/L	ND
Pentachlorobenzene	608-93-5	0.02 µg/L	ND
Hexachlorobenzene	118-74-1	0.02 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted

8 Chlorinated Solvents

With Reference To EPA 8260B And By Headspace Gas Chromatography Mass Spectrometric (HS-GC/MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Bromodichloromethane	75-27-4	1 µg/L	1
Bromoform	75-25-2	1 µg/L	ND
Carbon tetrachloride	56-23-5	1 µg/L	ND
Chlorodibromomethane	124-48-1	1 µg/L	1
Chloroethane	75-00-3	1 µg/L	ND
Chloroform	67-66-3	1 µg/L	2
Dibromomethane	74-95-3	1 µg/L	ND
1,1-Dichloroethane	75-34-3	1 µg/L	ND
1,2-Dichloroethane	107-06-2	1 µg/L	ND
1,1-Dichloroethene	75-35-4	1 µg/L	ND
cis-1,2-Dichloroethene	156-59-2	1 µg/L	ND
trans-1,2-Dichloroethene	156-60-5	1 µg/L	ND
trans-1,3-Dichloropropene	10061-02-6	1 µg/L	ND
Hexachlorobutadiene	87-68-3	1 µg/L	ND
Methylene chloride	75-09-2	1 µg/L	4
1,1,2,2-Tetrachloroethane	79-34-5	1 µg/L	ND
Tetrachloroethene	127-18-4	1 µg/L	ND
1,1,1-Trichloroethane	71-55-6	1 µg/L	ND
Trichloroethene	79-01-6	1 µg/L	ND
Vinyl chloride	75-01-4	1 µg/L	ND
Hexachloroethane	67-72-1	1 µg/L	ND
1,1,1,2-Tetrachloroethane	630-20-6	1 µg/L	ND
1,1,2-Trichloroethane	79-00-5	1 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted

9 Chlorophenols

With Reference To EPA 8270D And By Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
4-Chloro-3-methylphenol	59-50-7	0.5 µg/L	ND
2-Chlorophenol	95-57-8	0.5 µg/L	ND
2,4-Dichlorophenol	120-83-2	0.5 µg/L	ND
2,5-Dichlorophenol	583-78-8	0.5 µg/L	ND
2,6-Dichlorophenol	87-65-0	0.5 µg/L	ND
Pentachlorophenol (PCP)	87-86-5	0.5 µg/L	ND
2,3,4,6-Tetrachlorophenol	58-90-2	0.5 µg/L	ND
2,4,5-Trichlorophenol	95-95-4	0.5 µg/L	ND
2,4,6-Trichlorophenol	88-06-2	0.5 µg/L	ND
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5 µg/L	ND
2,3,5,6-Tetrachlorophenol	935-95-5	0.5 µg/L	ND
Tetrachlorophenols (TeCP)	25167-83-3	0.5 µg/L	ND
2,3,4-Trichlorophenol	15950-66-0	0.5 µg/L	ND
2,3,5-Trichlorophenol	933-78-8	0.5 µg/L	ND
3,4,5-Trichlorophenol	609-19-8	0.5 µg/L	ND
3,5- Dichlorophenol	591-35-5	0.5 µg/L	ND
2,3-Dichlorophenol	576-24-9	0.5 µg/L	ND
3,4-Dichlorophenol	95-77-2	0.5 µg/L	ND
3-chlorophenol	108-43-0	0.5 µg/L	ND
4-chlorophenol	106-48-9	0.5 µg/L	ND

Remark: ND = Not detected

10 Short-Chain Chlorinated Paraffins (SCCPs)

With Reference To ISO/PRF 12010 or EPA 8082 (Modified) And By Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Short chain chlorinated paraffins (SCCPs)	85535-84-8	0.4 µg/L	ND

Remarks: ND = Not detected

To be continued

Tests Conducted

11 Heavy Metals

Chromium VI: With Reference To EPA 7196A And By Ion Chromatography- Inductively Coupled Argon Plasma-Mass Spectrometry (IC-ICP-MS) Analysis.

Cyanide: With Reference To APHA 4500 And By Spectrophotometer Analysis.

Others: With Reference To EPA 3015A / EPA 3050B & 6020A And By Inductively Coupled Argon Plasma-Mass Spectrometry (ICP-MS) Analysis.

Chemical substances	CAS no.	Detection limit	Sample 1 (µg/L)
Lead, Pb	7439-92-1	1 µg/L	ND
Cadmium, Cd	7440-43-9	0.1 µg/L	ND
Mercury, Hg	7439-97-6	0.05 µg/L	ND
Antimony, Sb	7440-36-0	1 µg/L	92
Arsenic, As	7440-38-2	1 µg/L	ND
Chromium, Cr (total)	7440-47-3	1 µg/L	ND
Cobalt, Co	7440-48-4	1 µg/L	ND
Copper, Cu	7440-50-8	1 µg/L	23
Nickel, Ni	7440-02-0	1 µg/L	ND
Zinc, Zn	7440-66-6	1 µg/L	ND
Total Manganese	7439-96-5	1 µg/L	56
Chromium, hexavalent, Cr(VI)	7440-47-3	1 µg/L	ND
Cyanide (CN-)	Various	20 µg/L	ND

Remark: ND = Not detected

To be continued

Tests Conducted



Photo of after Treatment Area



Photo of Sampling Point (after Treatment)



Photo of Sample

Testing Period: From 15, Aug, 2016 To 26, Aug, 2016

End of report

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