

## TEST REPORT SR 0646/22

**Client:** Cofratec Indústria Têxtil Ltda.

**Address:** 6430, Edgar Máximo Zambotto Highway, Franco da Rocha - SP - Brazil.

**1 - Sample description:** One (01) sample of white coloured textile material.  
**Client identification:** "2317 02/0002 – Corante Disperso: 4250/4301/4303/4302".

**2 - Sample description:** One (01) sample of black coloured textile material.  
**Client identification:** "2306 01/0009 – Corante Disperso: 4256/4303".



**Application:** 60422

**Date of entry:** 01/25/2022

**Date of the test:** 01/28 until 02/16/2022 and 03/03 until 03/07/2022.

### TESTS AND RESULTS

**Determination of certain aromatic amines derived from azo colorants with and without extraction (BS EN ISO 14362-1/17)**

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum: 20 ppm	PASS

**Amines analyzed: Azo dyes can release by cleavage of their azo group, one or more of the amines listed:** 2,6-Dimethylaniline, 2-Methylaniline, 4-Chloroaniline, 2-Methoxy-5-Methylaniline, 2,4,5-Trimethylaniline, 4-Chloro-2-Methylaniline, 2,4-Diaminotoluene, 2,4-Diaminoanisole, 2-Naphthylamine, 2-Methyl-5-Nitroaniline, 4-Aminobiphenyl, 4-Aminoazobenzene, 4,4'-Oxydianiline, 4,4'-Diaminobiphenyl, 4,4'-Diaminodiphenylmethane, 4'-Amino-2,3'-Dimethylazobenzene, 4,4'-Methylene-bis(2-methylaniline), 3,3'-Dimethylbenzidine (o-Tolidine), 4,4'-Thiodianiline, 3,3'-Dichlorobenzidine, o-Dianisidine, 4,4'-Methylene bis(2-chloroaniline), o-Anisidine, 2,4-Dimethylaniline.

**Arylamine Salts extraction (BS EN ISO 14362-1/17)**

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum: 20 ppm	PASS

**Salts analyzed:** 4-chloro-o-toluidinium chloride, 2-Naphthylammoniumacetate, 2,4,5-trimethylaniline hydrochloride, 4-methoxy-m-phenylene diam-monium sulphate; 2,4-diaminoanisole sulphate

**Textile – Determination of formaldehyde (ISO 14184-1/11)**

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	All except packaging: max. 16 ppm	PASS

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### Determination of Bisphenol (BPA, BPS, BPF, BPAF) (US EPA 3550C: 2007 & US EPA 8321B: 2007)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum: 1 ppm	PASS

### Determination of disperse dyes (DIN 54231:2005)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Disperse Blue 1; Disperse Blue 106; Disperse Blue 124; Disperse Orange 3; Disperse Orange 11; Disperse Orange 37/76/59; Disperse Red 1; Disperse Yellow 3; Acid Red 26; Basic Red 9; Basic Violet 14; Direct Black 38; Direct Blue 6; Direct Blue 35: maximum 15 ppm each  Others: maximum 50 ppm each	PASS

### Determination of organotin compounds (ISO/TS 16179:2012)

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2 + 3	< LQM	DBT, DOT, MBT, TCyHT, TMT: 1 ppm each TPhT: 0.5 ppm TBT: 0.1 ppm	PASS

### Nonylphenol (NP), Octylphenol (OP), Nonylphenol Ethoxylates (NPEO/OPEO) (EN ISO 18254-1:2016)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Sum of NP and OP: Maximum: 100 ppm  Sum of NPEO and OPEO: Maximum: 100 ppm	PASS

### Determination of Quinoline (DIN 54231/05)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum: 50 ppm	PASS

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### Determination of metal content

#### Part 1: Determination of metals using microwave digestion (BS EN 16711-1:2015)

#### Analysis performed by ICP-OES

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	Cd = < LQM	Maximum: 40 ppm	PASS
	Pb = < LQM	Maximum: 90 ppm	PASS
	As = <LQM	Maximum: 10 ppm	PASS
	Hg = <LQM	Maximum: 0.5 ppm	PASS

### Determination of Benzene and Toluene Chloride (DIN EN 17137:19)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum 1 ppm	PASS

### pH Value (ISO 3071/20)

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	6.9	4.0 – 7.5	PASS

### Determination of polycyclic aromatic hydrocarbons (PAHs) (ISO 16190/13)

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Total: 10 ppm	PASS

### Determination of Vinyl Chloride Monomer (EN ISO 6401:2008)<sup>1</sup>

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum 1 ppm	PASS

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### Determination of phthalate content (CPSC-CH-C 1001-09.3/2018)\*

Sample	Results (%)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	< LQM	Maximum: 500 ppm each Total: 1000 ppm	PASS

### Determination of metal content

#### Part 2: Determination of metals extracted by acidic artificial perspiration solution (BS EN 16711-2:2015)

#### Analysis performed by ICP-OES

Sample	Results (ppm)	Orientation (Manual Veja 2021)	Evaluation
1 + 2	Antimony (Sb): < LQM	Maximum 30 ppm	PASS
	Arsenic (As): < LQM	Maximum 0.1 ppm	
	Barium (Ba): < LQM	Maximum 1000 ppm	
	Cadmium (Cd): < LQM	Maximum 40 ppm	
	Chromium (Cr): < LQM	Maximum 2 ppm	
	Lead (Pb): < LQM	Maximum 0.2 ppm	
	Mercury (Hg): < LQM	Maximum 0.02 ppm	
	Selenium (Se): < LQM	Maximum 500 ppm	
	Cobalt (Co): < LQM	Maximum 1 ppm	
	Copper (Cu): < LQM	Maximum 25 ppm	
Nickel (Ni): < LQM	Maximum 1 ppm		
	Tin (Sn): < LQM	-	

#### Method Quantification Limit – LQM

<b>- Organotin: 0.2 ppm</b>		
n-butyltin (MBT)	Monooctyltin (MOT)	Trimethyltin (TMT)
tributyltin (TBT)	Di-n-octyltin (DOT)	Tricyclohexyltin (TCyHT)
Dibutyltin (DBT)	Triphenyltin (TPhT)	Trioctyltin (TOT)
Tetrabutyltin (TeBT)	Tripropyltin (TPT)	
<b>- Formaldehyde (Textile): 16 ppm</b>		
<b>- Azo Dyes: 5 ppm per amine</b>		
<b>- Arylamine salts: 5 ppm each</b>		
<b>- Quinoline: 10 ppm</b>		
<b>- Alkyl Phenol (ppm):</b>	NP/ OP: 10 ppm	OPEO/ NPEO: 50 ppm
<b>- Bisphenols: 1 ppm</b>		
Bisphenol A (BPA)	Bisphenol-S (BPS)	
Bisphenol-F (BPF)	Bisphenol-AF (BPAF)	

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Method Quantification Limit – LQM		
<b>-PAHs (ppm): 0.5 ppm</b>		
Naphthalene	Benzo[e]pyrene	
Acenaphthylene	Benzo[j]fluoranthene	
Acenaphthene	Chrysene	
Fluorene	Benzo[b]fluoranthene	
Phenanthrene	Benzo[k]fluoranthene	
Anthracene	Benzo[a]pyrene	
Fluoranthene	Indeno[1,2,3-cd]pyrene	
Pyrene	Dibenzo[a,h]anthracene	
Benzo[a]anthracene	Benzo[g,h,i]perylene	
<b>- Soluble Metals BS EN 16711-2:</b>		
Antimony (Sb): 10.0 ppm	Cadmium (Cd): 0.1 ppm	Mercury (Hg): 0.02 ppm
Arsenic (As): 0.1 ppm	Chromium (Cr): 2.0 ppm	Selenium (Se): 10.0 ppm
Barium (Ba): 2.5 ppm	Lead (Pb): 0.2 ppm	Tin (Sn): 10.0 ppm
Cobalt (Co): 1 ppm	Copper (Cu): 2.5 ppm	Nickel (Ni): 1 ppm
<b>- BS EN 16711-1 (Total):</b>		
Lead (Pb): 10.0 ppm	Cadmium (Cd): 10.0 ppm	
Arsenic (As): 10.0 ppm	Mercury (Hg): 0.5 ppm	
<b>- Vinyl Chloride Monomer: 0.2 ppm</b>		
<b>- Benzene and Toluene Chloride: 0.1 ppm</b>		
2,6-Dichlorotoluene	2,3,6-Trichlorotoluene	1,4-Dichlorobenzene
Chlorobenzene	2,4,5-Trichlorotoluene	1,2,3-Trichlorobenzene
2-Chlorotoluene	α,α,α-trichlorotoluene	1,2,4-Trichlorobenzene
3-Chlorotoluene	2,3,4,5-tetrachlorotoluene	1,3,5-Trichlorobenzene
4-Chlorotoluene	2,3,4,6-tetrachlorotoluene	1,2,3,4-Tetrachlorobenzene
α-chlorotoluene	2,3,5,6-tetrachlorotoluene	1,2,3,5-Tetrachlorobenzene
2,3-Dichlorotoluene	α,α,α,4-tetrachlorotoluene	1,2,4,5-Tetrachlorobenzene
2,4-Dichlorotoluene	pentachlorotoluene	Pentachlorobenzene
2,5-Dichlorotoluene	1,2-Dichlorobenzene	Hexachlorobenzene
3,4-Dichlorotoluene	1,3-Dichlorobenzene	
<b>- Disperse dyestuffs (carcinogenic): 15 ppm</b>		
Acid Red 26	Basic Green 4	Disperse Blue 1
Basic Red 9	C.I. Direct Red28	Disperse Blue 3
Basic Violet 14	C.I. Direct Black 38	Disperse Blue 7
Direct Blue 6	Disperse Yellow 49	Disperse Blue 26
Disperse Orange 11	Disperse Orange 1	Disperse Blue 35A and 35B
Direct Brown 95	Disperse Orange 3	Disperse Blue 102
Disperse Red 151	Disperse Orange 37/76/59	Disperse Blue 106
C.I. Basic Violet 3	Disperse Orange 149	Disperse Blue 124
Disperse Red 1	Disperse Yellow 23	Basic Green 4
Disperse Red 11	Disperse Yellow 7	C.I. Solvent Blue 4
Disperse Red 17	Disperse Yellow 56	C.I. Basic Blue26
Solvent Yellow 2	Disperse Yellow 39	Disperse Yellow 9
Disperse Yellow 3	Disperse Yellow 1	
4,4'-bis (dimethylamino)-4''-(methylamino)trityl alcohol		

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Method Quantification Limit – LQM		
<b>- Phthalates: 0.015 %</b>		
Dimethyl phthalate (DMP)	Di-n-hexyl phthalate (DNHP)	Methyl butyl phthalate (MBP)
Di-(2-ethyl-hexyl) phthalate (DEHP)	Butyl benzyl phthalate (BBP)	Di-n-pentyl phthalate (DPP)
Diisobutyl phthalate (DIBP)	Diisodecyl phthalate (DIDP)	Diisooctyl phthalate (DIOP)
Dibutyl phthalate (DBP)	Diethyl phthalate (DEP)	Bis(2-methoxyethyl) phthalate (BMEP)
Diisoheptyl phthalate (DIHP)	Diisononyl phthalate (DINP)	Dipropyl phthalate (DPrP)
Dicyclohexyl phthalate (DCHP)	Di-n-octyl phthalate (DNOP)	Diisopentyl phthalate (DIPP)
N-pentyl-isopentyl phthalate (PiPP)		
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear		
1,2-benzenedicarboxylic acid, dipentylester, branched and linear		
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)		
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)		

**<sup>1</sup>This test has been outsourced:**

**Enterprise:** Centre Testing International Group Co., Ltd.  
**Address:** Liuxian 3<sup>rd</sup> Road, Xin'an Street, Bao'an District, Shenzhen, P.R. China.  
**Document:** A2220074830122  
**Date:** 03/03 until 03/07/2022.

**Considerations:**

ppm (parts per million) = mg/kg  
 Sampling was carried by client.

At the customer's request, the samples were grouped. In case of a positive result, IBTeC recommends testing each separate sample.

With the exception of the outsourced tests, the remaining tests were performed in the laboratory permanent facilities.

With no further information for the time being, we now issue the present report.

This report integrates the sheet of signatures attached.

Novo Hamburgo, March 07<sup>th</sup>, 2022.

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## TEST REPORT SR 0646/22

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