

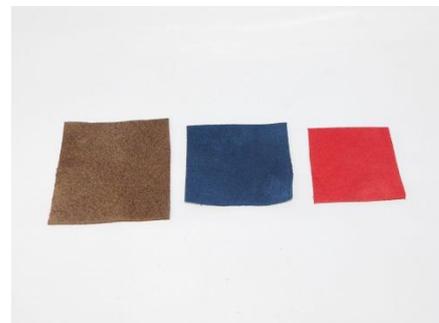
## TEST REPORT SR 0104/22

**Client:** Indústria e Comércio de Couros Dowidi Ltda.  
**Address:** 501, Irineu Becker Avenue, Dois Irmãos – RS – Brazil.

**1 - Sample description:** One (01) sample of brown coloured leather.  
**Client identification:** “Couro Bovino Camurça Hidrofugado – Castanho. Composição: CI (Brown 83 / Brown 282 / Brown 434 / Oliva HT / Brown 354)”.

**2 - Sample description:** One (01) sample of blue coloured leather.  
**Client identification:** “Couro Bovino Camurça Hidrofugado – Azul. Composição: CI (Blue 193 / Green 68 / Black 210 / Black 234 / Violet 17)”.

**3 - Sample description:** One (01) sample of red coloured leather.  
**Client identification:** “Couro Bovino Camurça Hidrofugado – Vermelho. Composição: CI (Red 239 / Red 131 / Orange 2 / Yellow 42 / Brown 97)”.



**Application:** 60002  
**Date of entry:** 12/20/2021  
**Date of the test:** 12/22/2021 until 01/19/2022.

### TESTS AND RESULTS

**Chemical determination of metal content – Part 1: Extractable metals (ISO 17072-1/19)**  
**Analysis performed by ICP-OES**

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
	Antimony (Sb) < LQM	Maximum 30 ppm	PASS
	Arsenic (As) < LQM	Maximum 0.1 ppm	PASS
	Barium (Ba) < LQM	Maximum 1000 ppm	PASS
	Cadmium (Cd) < LQM	Maximum 0.1 ppm	PASS
	Lead (Pb) < LQM	Maximum 0.2 ppm	PASS
1 + 2 + 3	Mercury (Hg) < LQM	Maximum 0.02 ppm	PASS
	Selenium (Se) < LQM	Maximum 500 ppm	PASS
	Chromium (Cr) <b>54.6</b>	Maximum 60 ppm	PASS
	Cobalt (Co): < LQM	Maximum 1 ppm	PASS
	Copper (Cu): < LQM	Maximum 25 ppm	PASS
	Nickel (Ni): < LQM	Maximum 1 ppm	PASS

**Note: The results presented in this document are valid only to the tested samples and may not be reproduced without the laboratory authorization. Authorization will only be given for the total reproduction of this document.**

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### Chemical determination of metal content – Part 2: Total metal content (ISO 17072-2/19) Analysis performed by ICP-OES

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	Cadmium (Cd) < LQM	Maximum 40 ppm	PASS
	Mercury (Hg) < LQM	Maximum 0.5 ppm	PASS
	Lead (Pb) < LQM	Maximum 90 ppm	PASS
	Arsenic (As) < LQM	Maximum 10 ppm	PASS

### Determination of chromium (VI) content (ISO 17075-1/17) Aging for 24 hours at 80 ±2 °C and relative humidity less than 10% (ISO10195-2/18)

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	< LQM	Maximum: 3 ppm	PASS

### Chemical determination of formaldehyde content – Part 1: Method using HPLC (ISO 17226-1/21)

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	7.3	Maximum 16 ppm	PASS

### Determination of Ortho Phenylphenol – OPP (ISO 17070/15)

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	< LQM	Maximum: 1000 ppm	PASS

### Determination of certain aromatic amines derived from azo colorants (ISO 17234-1/2020) Analytical technique used: Gas Chromatography (GCMS).

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	< LQM	Maximum: 20 ppm each	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.

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### Arylamine Salts (ISO 17234-1/2020)

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	< LQM	Maximum: 20 ppm each	PASS

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

### pH Value (ISO 4045/18)

Sample	Results	Orientation (V FAIR)	Evaluation
1 + 2 + 3	pH: 3.7	pH: Minimum 3,5	PASS

### Determination of alkylphenols and alkylphenol ethoxylates (NP, OP, OPEO, NPEO) (ISO 18254-1/16) <sup>1</sup>

Sample	Results (ppm)	Orientation (ppm) (V FAIR)	Evaluation
1 + 2 + 3	< LQM	NP + OP: Maximum 100 ppm NPEO + OPEO: Maximum 100 ppm	PASS

### Short-chain chlorinated paraffins (SCCPs) (ISO 18219/2015) <sup>1</sup> Middle-chain chlorinated paraffins (MCCPs) (ISO 18219/2015) <sup>1</sup>

Sample	Results (ppm)	Orientation (V FAIR)	Evaluation
1 + 2 + 3	SCCPs = < LQM MCCPs = < LQM	Maximum: 1000 ppm	PASS

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

Sample	Results (ppm)	Orientation (ppm) (V FAIR)	Evaluation
1 + 2 + 3	< LQM	Maximum 50 ppm	PASS

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Method Quantification Limit – MQL		
<b>- ISO 17072-1 Soluble:</b>		
Antimony (Sb): 10.0 ppm	Cadmium (Cd): 0.1 ppm	Mercury (Hg): 0.02 ppm
Arsenic (As): 0.1 ppm	Chromium (Cr): 2.5 ppm	Selenium (Se): 10.0 ppm
Barium (Ba): 2.5 ppm	Lead (Pb): 0.2 ppm	Cobalt (Co): 1 ppm:
Copper (Cu): 2.5 ppm	Nickel (Ni): 1 ppm	
<b>- ISO 17072-2 Total:</b>		
Arsenic (As): 10.0 ppm	Cadmium (Cd): 5.0 ppm	
Mercury (Hg): 0.5 ppm	Lead (Pb): 5.0 ppm	
<b>- Chromium VI: 3.00 ppm</b>		
<b>- Formaldehyde (Leather): 5 ppm</b>		
<b>- Azo Dyes: 5 ppm per amine</b>		
<b>- Arylamine salts: 5 ppm each</b>		
<b>- Orthophenylphenol (OPP): 10 ppm</b>		
<b>- NP/ OP: 10 ppm</b>	<b>OPEO/ NPEO: 50 ppm</b>	
<b>- SCCPs: 100 ppm</b>	<b>SCCPs: 100 ppm</b>	
<b>- MCCPs: 100 ppm</b>		
<b>- Quinoline: 10 ppm</b>		

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

**Enterprise:** Centre Testing International Group Co., Ltd.  
**Address:** Liuxian 3rd road, Xin'an Street, Bao'an District, Shenzhen, P.R China.  
**Document:** A2210538200118  
**Date:** 01/05 until 01/07/2022.

**Considerations:**

ppm (parts per million) = mg/kg

Photometric cell (Chromium VI): 10 mm

Sampling was carried by client.

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

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

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

This report integrates the sheet of signatures attached.

Novo Hamburgo, January 19<sup>th</sup>, 2022.

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*Dienifer C. S. Krug*

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