

**Applicant:** SARL COUSU BIO

LE BOURG

23150 MAZEIRAT - França

**Invoicing applicant:** SARL COUSU BIO

**Sample Description:** Knitted fabric

**Color:** -

**Claimed Fibre Composition:** -

**Your Reference:** #1 Fleece

**Requirements:** -

**Sample Receiving Date:** 20.02.2020

**Test Start Date:** 21.02.2020

**Test End Date:** 02.03.2020

**Service Type:** Normal

**Working Days:** 5

**Observation:** -



Trofa, 5 March 2020

Laboratory Manager

**Note:**

The results of this report were obtained according to the procedures described in Quality Lab's Quality Management Manual and refer only to the samples submitted to tests, as above mentioned. The Test Report cannot be reproduced except in full, without prior approval of the Laboratory. Tests marked with \* are not included in the IPAC Accreditation and tests marked with \* are not included in the scope of the accreditation and were carried out by external supplier. The opinion expressed in this report is not included in the scope of accreditation. \*A\*- Amended.  
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## Sample Information:

Sample ID	Description	Equivalent Code
001	Knitted fabric	#1 Fleece

Test	Sample ID
	001
DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING	F
DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING	F
DIMENSIONAL STABILITY TO WASHING: COLD WATER	NR
DETERMINATION OF FABRIC PROPENSITY TO SURFACE FUZZING AND TO PILLING. Part 2: Modified Martindale method.	NR
NONYLPHENOLETHOXYLATES (NPEO) AND OCTYLPHENOLETHOXYLATES (OPEO)	P
NONYLPHENOL (NP) and OCTYLPHENOL (OP)	P
TOTAL CADMIUM	P
TOTAL LEAD	P
EXTRACTABLE HEAVY METALS FOR TEXTILES	P
DETERMINATION OF FORMALDEHYDE Part 1: Free and hydrolised formadehyde	P
PESTICIDES RESIDUES IN NATURAL FIBRES	P

**Note:** P= Meets Customer requirements; F= Does not meets Customer requirements; NR = No specified requirements;

In the assessment of conformity, the test uncertainty associated was not taken into account, unless otherwise indicated by the customer.

## DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING

ISO 5077:2007

Sample ID	Results		Requirement
001	Length	-5.0%	Max. 8%
	Width	-9.0%	
<b>Conclusion</b>			Does not meets Customer requirements

### Test Conditions:

- Conditioning conditions:  $20 \pm 2^\circ\text{C}$  and  $65 \pm 4\%$  (H.R.)
- Washing machine: Wascator
- Washing program: 4N ( $40^\circ\text{C}$ )
- Total load + samples: 2kg
- Load: Type III
- Detergent: Det Ref<sup>®</sup>2 + sodium perborate + TAED
- Drying process: Tumble Dry (1 dot)
- Number of cycles of washing and drying: 1
- Number of tests: 1
- Uncertainty for a probability of coverage of 95%:  $\pm 0.3\%$

### Notes:

Interpretation: (-) sign for shrinkage & (+) sign for extension.



## DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING

ISO 5077:2007

Sample ID	Results		Requirement
001	Length	-4.5%	Max. 8%
	Width	-11.5%	
<b>Conclusion</b>			Does not meets Customer requirements

### Test Conditions:

- Conditioning conditions:  $20 \pm 2^{\circ}\text{C}$  and  $65 \pm 4\%$  (H.R.)
- Washing machine: Wascator
- Washing program: 6N (60°C)
- Total load + samples: 2kg
- Load: Type III
- Detergent: Det Ref®2 + sodium perborate + TAED
- Drying process: Tumble Dry (1 dot)
- Number of cycles of washing and drying: 1
- Number of tests: 1
- Uncertainty for a probability of coverage of 95%:  $\pm 0.3\%$

### Notes:

Interpretation: (-) sign for shrinkage & (+) sign for extension.

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### DIMENSIONAL STABILITY TO WASHING: COLD WATER

NP 3292:1988

Sample ID	Results		Requirement
001	Length	+0.6%	No Requirements
	Width	-6.5%	
Conclusion			--

#### Test Conditions:

- Conditioning conditions:  $20 \pm 2^\circ\text{C}$  and  $65 \pm 4\%$  (H.R.)
- Drying process: Flat Dry
- Number of cycles of washing and drying: 1
- Number of tests: 1
- Uncertainty for a probability of coverage of 95%:  $\pm 0.5\%$

#### Notes:

Interpretation: (-) sign for shrinkage & (+) sign for extension.

### DETERMINATION OF FABRIC PROPENSITY TO SURFACE FUZZING AND TO PILLING.

#### Part 2: Modified Martindale method.

EN ISO 12945-2:2000

Sample ID	Number of Rubs	Superficial aspect	Results	Requirement
001	2000	Fuzzing and Pilling	3	No Requirements
Conclusion				--

#### Test Conditions:

- Conditioning conditions:  $20 \pm 2^\circ\text{C}$  /  $65 \pm 4\%$  (H.R.)
- Without pre-wash
- Abrasive type: Knit
- Applied mass: 155 g
- Number of tests: 3
- Number of classifiers: 2
- Uncertainty for a probability of coverage of 95%:  $\pm 0,5$

#### Notes:

##### INTERPRETATION:

- 5- No visual change;
- 4- Slight Surface Fuzzing;
- 3- Moderate Fuzzing / Isolated fully formed Pills;
- 2- Significant change: Distinct fuzzing and/ or pilling;
- 1- Severe Change: Dense fuzzing and/ or pilling which covers the specimen.

## NONYLPHENOLETHOXYLATES (NPEO) AND OCTYLPHENOLETHOXYLATES (OPEO)

CPSD-AN-00735-MTHD/ EN ISO 18254\*

Sample ID	Results		Requirement
001	NPEO	N.D	<20 mg/kg
	OPEO	N.D	
<b>Conclusion</b>			Meets Customer requirements

### Notes:

- Detection Limit: Each (NPEO & OPEO) - 10; Sum (NPEO & OPEO) - 10
- N.D: Not detected

## NONYLPHENOL (NP) and OCTYLPHENOL (OP)

House method - analysis by HPLC-MS\*

Sample ID	Results		Requirement
001	NP	N.D	<10 mg/kg
	OP	N.D	
<b>Conclusion</b>			Meets Customer requirements

### Notes:

- Detection Limit: Each (NP&OP) - 10; Sum (NP&OP) - 10
- N.D: Not detected



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### TOTAL CADMIUM

DIN EN 1122:2002\*

Sample ID	Result	Requirement
001	N.D	< 45 mg/kg
<b>Conclusion</b>		Meets Customer requirements

#### Notes:

- Detection Limit: 10 mg/Kg
- N.D: Not detected

### TOTAL LEAD

CPSD-AN-00164-MTHD\*

Sample ID	Result	Requirement
001	< 10 mg/kg	< 50 mg/kg
<b>Conclusion</b>		Meets Customer requirements

#### Test Conditions:

Microwave digestion with acid mixture and analysis by Inductively Coupled Argon Plasma Mass Spectrometer (ICP-MS).

#### Limit:

#### Notes:

- Detection Limit: 10 mg /kg
- N.D: Not detected

## EXTRACTABLE HEAVY METALS FOR TEXTILES

CPSD-AN-00063-MTHD\*

Sample ID	Results		Requirement
001	As (Arsenic)	N.D	< 0.2 mg/ kg
	Pb (Lead)	N.D	
	Cd (Cadmium)	N.D	< 0.1 mg/ kg
	Cr (Chromium)	N.D	< 1.0 mg/ kg
	Co (Cobalt)	N.D	
	Cu (Copper)	N.D	< 25.0 mg/ kg
	Ni (Nickel)	N.D	< 1.0 mg/ kg
	Sb (Antimony)	N.D	< 0.2 mg/ kg
	Hg (Mercury)	N.D	< 0.02 mg/ kg
	Mn (Manganese)	N.D	< 0.2 mg/ kg
Conclusion			Meets Customer requirements

### Test Conditions:

- Extraction with artificial acidic perspiration, with reference to DIN EN ISO 105 E04, for 1 hour at 37±2°C, detection with reference to DIN EN 1483:1997 & DIN EN ISO 11885:1998 with AAS or ICP
- N.D: Not detected
- Detection Limit (mg/kg): Pb,Cr,Co,Ni: 0.1; As,Cd: 0.02; Sb: 0.5, Cu: 5, Hg: 0.005, Mn: 0.25



## DETERMINATION OF FORMALDEHYDE Part 1: Free and hydrolised formadehyde

ISO 14184-1:2011\*

Sample ID	Results	Requirement
001	N.D	Max. 16 mg/kg
<b>Conclusion</b>		Meets Customer requirements

### Notes:

- Detection Limit: 16 mg/kg
- N.D: Not detected

## PESTICIDES RESIDUES IN NATURAL FIBRES

CPSD-AN-00097-MTHD\*

Sample ID	Result	Requirement
001	Quinoline N.D	< 0.1 mg/kg
<b>Conclusion</b>		Meets Customer requirements

### Notes:

- Detection Limit: 0.1 mg/kg
- N.D: Not detected

\*End of Report\*