

<b>LT S.r.l.</b> <b>Laboratorio analisi tessili</b> V.le dell'Industria 42 - 21052 Busto Arsizio (VA)	Capitale Sociale EURO 16.000 i.v. R.I. N° 02642870121 R.E.A. N° 274074 CF e P.IVA 02642870121 Tel. 0331 636078 Fax 0331 672986 e-mail: lt@lt-srl.191.it
---	---

Spett.le Besani S.r.l.  
Via per Gallarate, 50/A  
21010 Besnate (VA)

Alla c.a. Sig. Riva

Busto Arsizio, 28 luglio 2014

Cod. cliente: 044	Data ricevimento materiale: 04/07/2014
Report: R140763	Campionamento effettuato dal cliente

<b>1. Descrizione del materiale</b>
-------------------------------------

N. 1 telo tessuto art. 5981 Jersey Makò 70/2 Jacquard Sanforizzato colore 8, composizione dichiarata 100% cotone, denominato campione 1.

N. 1 telo tessuto SANF Jersey Makò 70/2 unito, tinto e mercerizzato in filo, rimercerizzato in pezza e sanforizzato, colore blu, composizione dichiarata 100% cotone, denominato campione 2.

Viene richiesto di determinare:

- alchilfenoli etossilati (APEO): ottil-fenolo etossilato (OPEO) e nonil-fenolo etossilato (NPEO)
- ammine aromatiche.

<b>2. Analisi effettuate e risultati ottenuti</b>
---

I risultati sono riportati nelle tabelle seguenti (in lingua inglese e italiano).

Sample / Campione	1 - Piece of fabric / Taglio di tessuto (art. 5981 Jersey Makò 70/2 Jacquard Sanforizzato)
Composition / Composizione	100% cotton / cotone
Colour / Colore	8

Determination of alkylphenoethoxylate / Determinazione degli alchilfenoli etossilati	
Extraction method Tipo di estrazione	Methyl alcohol in ultrasonic bath 40 °C for 60 minutes Alcool metilico a 40°C per 60 minuti in bagno ultrasuoni
Detection Rilevazione	Liquid chromatography - Mass spectrometry (LC-MS) Cromatografia liquida - Rivelatore a selezione di massa (LC-MS)
Detection limit (LOD) Limite di rilevabilità (LOD)	1 mg/kg

Results / Risultati	
Nonylphenoethoxylate (NF-10 O.E.)	<b>not detected / non rilevato</b>
Octylphenoethoxylate (OF-10 O.E.)	<b>not detected / non rilevato</b>
Notes Note	Not detectable / Non Rilevabile = less than the detection limit / inferiore al limite di rilevabilità Determination made by external laboratory / Determinazione effettuata c/o laboratorio esterno

Determination of alkylphenol / Determinazione degli alchilfenoli	
Extraction method Tipo di estrazione	Methyl alcohol in ultrasonic bath 40 °C for 50 minutes Alcool metilico a 40°C per 50 minuti in bagno ultrasuoni
Detection Rilevazione	Gas chromatography - Mass spectrometry (GC-MS) Gas cromatografo - rivelatore a selezione di massa (GC-MS)
Detection limit (LOD) Limite di rilevabilità (LOD)	1 mg/kg

Results / Risultati	
Nonylphenol (NP) (CAS N. 25154-53-3)	<b>not detected / non rilevato</b>
Octylphenol (OF-10 O.E.)	<b>not detected / non rilevato</b>
Notes Note	Not detectable / Non Rilevabile = less than the detection limit / inferiore al limite di rilevabilità Determination made by external laboratory / Determinazione effettuata c/o laboratorio esterno

Sample / Campione	1 - Piece of fabric / Taglio di tessuto (art. 5981 Jersey Makò 70/2 Jacquard Sanforizzato)
Composition / Composizione	100% cotton / cotone
Colour / Colore	8

<b>Detection of the Use of Banned AZO Colourants / Determinazione dei coloranti Azoici</b>		
Banned azo colourants per German and European law (Appendix 8 to REACH Regulation Annex XVII) are such colourants that may form one of the following amines by splitting up one or more azo groups.		
Test method / Metodo del test According to the official test procedures DIN EN 14362-1 2012 for textile, DIN EN ISO 17234-1:2010 for leather material. The presence of 4-aminoazobenzene is determined by DIN EN 14362-3:2012 for textile, DIN EN ISO 17234-2:2011 for leather material. Removal of fat by n-hexane (in case of leather), treatment with citric buffer, reductive cleavage with sodium dithionite, extraction with ether, detection by GC/MS and/or HPLC/DAD.		
Analytical detection limit: / Limite analitico di rilevabilità: 5 mg/kg		
List of aromatic amines / Lista delle ammine aromatiche		
benzidine	3,3'-dichlorobenzidine	2,4-toluylendiamine
4-chloro-o-toluidine	3,3'-dimethylbenzidine	4,4'-thiodianiline
2-naphthylamine	4,4'-diaminodiphenylmethane	p-cresidine
4-aminodiphenyl	3,3'-dimethoxybenzidine	4,4'-oxydianiline
p-chloroaniline	4,4'-methylene-bis-(2-chloroaniline)	o-toluidine
2,4-diaminoanisole	2,4,5-trimethylaniline	o-anisidine
3,3'-dimethyl-4,4'-diaminodiphenylmethane		4-aminoazobenzene
The amines o-aminoazotoluene and 2-amino-4-nitrotoluene are detected by means of their degradation products o-toluidine or 2,4-toluylenediamine.		

Result / Risultato	<b>not detected / non rilevato</b>
--------------------	------------------------------------

<p><b>Interpretation of Test Results:</b> n/n = not detected</p> <p>In case of levels per amine component <math>\leq 30</math> mg/kg: not detected (n/n). According to the analysis as carried out, azo colourants banned under the Ordinance on Commodities were not detected in the article submitted.</p> <p>In case of levels per amine component <math>&gt; 30</math> mg/kg: The analysis result suggests that the article submitted has been manufactured or treated by using azo colourants banned under the Ordinance on Commodities.</p> <p>In case of a result between 25 and 35 mg/kg we remark that due to the error range of the method these measurement values represent a border line case.</p>
---

Sample / Campione	2 - Piece of fabric / Taglio di tessuto (SANF Jersey Makò 70/2 unito)
Composition / Composizione	100% cotton / cotone
Colour / Colore	Blue / Blu

Determination of alkylphenoethoxylate / Determinazione degli alchilfenoli etossilati	
Extraction method Tipo di estrazione	Methyl alcohol in ultrasonic bath 40 °C for 60 minutes Alcool metilico a 40°C per 60 minuti in bagno ultrasuoni
Detection Rilevazione	Liquid chromatography - Mass spectrometry (LC-MS) Cromatografia liquida - Rivelatore a selezione di massa (LC-MS)
Detection limit (LOD) Limite di rilevabilità (LOD)	1 mg/kg

Results / Risultati	
Nonylphenoethoxylate (NF-10 O.E.)	<b>not detected / non rilevato</b>
Octylphenoethoxylate (OF-10 O.E.)	<b>not detected / non rilevato</b>

Notes Note	Not detectable / Non Rilevabile = less than the detection limit / inferiore al limite di rilevabilità Determination made by external laboratory / Determinazione effettuata c/o laboratorio esterno
---------------	--

Determination of alkylphenol / Determinazione degli alchilfenoli	
Extraction method Tipo di estrazione	Methyl alcohol in ultrasonic bath 40 °C for 50 minutes Alcool metilico a 40°C per 50 minuti in bagno ultrasuoni
Detection Rilevazione	Gas chromatography - Mass spectrometry (GC-MS) Gas cromatografo - rivelatore a selezione di massa (GC-MS)
Detection limit (LOD) Limite di rilevabilità (LOD)	1 mg/kg

Results / Risultati	
Nonylphenol (NP) (CAS N. 25154-53-3)	<b>not detected / non rilevato</b>
Octylphenol (OF-10 O.E.)	<b>not detected / non rilevato</b>

Notes Note	Not detectable / Non Rilevabile = less than the detection limit / inferiore al limite di rilevabilità Determination made by external laboratory / Determinazione effettuata c/o laboratorio esterno
---------------	--

Sample / Campione	2 - Piece of fabric / Taglio di tessuto (SANF Jersey Makò 70/2 unito)
Composition / Composizione	100% cotton / cotone
Colour / Colore	Blue / Blu

<b>Detection of the Use of Banned AZO Colourants / Determinazione dei coloranti Azoici</b>		
Banned azo colourants per German and European law (Appendix 8 to REACH Regulation Annex XVII) are such colourants that may form one of the following amines by splitting up one or more azo groups.		
Test method / Metodo del test According to the official test procedures DIN EN 14362-1 2012 for textile, DIN EN ISO 17234-1:2010 for leather material. The presence of 4-aminoazobenzene is determined by DIN EN 14362-3:2012 for textile, DIN EN ISO 17234-2:2011 for leather material. Removal of fat by n-hexane (in case of leather), treatment with citric buffer, reductive cleavage with sodium dithionite, extraction with ether, detection by GC/MS and/or HPLC/DAD.		
Analytical detection limit: / Limite analitico di rilevabilità: 5 mg/kg		
List of aromatic amines / Lista delle ammine aromatiche		
benzidine	3,3'-dichlorobenzidine	2,4-toluylendiamine
4-chloro-o-toluidine	3,3'-dimethylbenzidine	4,4'-thiodianiline
2-naphthylamine	4,4'-diaminodiphenylmethane	p-cresidine
4-aminodiphenyl	3,3'-dimethoxybenzidine	4,4'-oxydianiline
p-chloroaniline	4,4'-methylene-bis-(2-chloroaniline)	o-toluidine
2,4-diaminoanisole	2,4,5-trimethylaniline	o-anisidine
3,3'-dimethyl-4,4'-diaminodiphenylmethane		4-aminoazobenzene
The amines o-aminoazotoluene and 2-amino-4-nitrotoluene are detected by means of their degradation products o-toluidine or 2,4-toluylenediamine.		

Result / Risultato	<b>not detected / non rilevato</b>
--------------------	------------------------------------

<p><b>Interpretation of Test Results:</b> n/n = not detected</p> <p>In case of levels per amine component <math>\leq 30</math> mg/kg: not detected (n/n). According to the analysis as carried out, azo colourants banned under the Ordinance on Commodities were not detected in the article submitted.</p> <p>In case of levels per amine component <math>&gt; 30</math> mg/kg: The analysis result suggests that the article submitted has been manufactured or treated by using azo colourants banned under the Ordinance on Commodities.</p> <p>In case of a result between 25 and 35 mg/kg we remark that due to the error range of the method these measurement values represent a border line case.</p>
---

Molinari per. ind. Ezio	Martelli per. ind. Marco
-------------------------	--------------------------

Allegati: Campioni di riferimento