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Svoboda Zvířat
to Mrs Lucie Moracová
Koterovská 84

326 00 Plzeň
Tschechien

AZ: K 2402 FL

16.12.2015

Dear Mrs. Moracová,

enclosed you will find the analytical results of six fur samples. The samples were tested for alkylphenols (AP) and ethoxylated alkylphenols (APEO), hexavalent chromium, formaldehyde and polycyclic aromatic hydrocarbons (PAH).

For details of single results, please refer to our enclosed report of analysis.

ANALYSIS REPORT:

1. DESCRIPTION OF THE ORDER
2. TESTING METHODS
3. RESULTS

With best regards
Bremer Umweltinstitut

Ulrike Siemers,
Grad. Engineer Chemical Technics, Test director

Enclosures: Analysis Report



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Geschäftsführung:
Dr. Norbert Weis, Ulrike Siemers
Amtsgericht Bremen HRB 14617
Steueridentnummer DE 154288998
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ANALYSIS REPORT

1 Description of order

Client:	Svoboda Zvířat Frau Lucie Moracova Koterovská 84 326 00 Plzeň Tschechien
Date of order:	25-11-2015
Agent:	Bremer Umweltinstitut Gesellschaft für Schadstoffanalysen und Begutachtung mbH Fahrenheitstraße 1 28359 Bremen
Number of report:	K 2402 FL
Sample receipt:	27-11-2015
Sample period:	07-12-2015 to 14-12-2015
Sampling:	The samples were taken and sent by the client.

1.1 Description of samples

sample number	article	test intention
K 2402 FL - 1	<i>sample</i> 01 CZE, Jacket with fur trim, icepeak 	<ul style="list-style-type: none">- alkylphenols (AP) and ethoxylated alkylphenols (APEO)- hexavalent chromium- formaldehyde- polycyclic aromatic hydrocarbons (PAH)

sample number	article	test intention
K 2402 FL - 2	<p><i>sample</i> 02 CZE, Jacket with fur trim, Poivre Blanc</p>  <p>A photograph of a pink quilted jacket with a fur-trimmed hood and white polka dots. A white sample tag with the handwritten text 'K 2402-2' and 'SAMPLE 02/02' is pinned to the front.</p>	<ul style="list-style-type: none">- alkylphenols (AP) and ethoxylated alkylphenols (APEO)- hexavalent chromium- formaldehyde- polycyclic aromatic hydrocarbons (PAH)
K 2402 FL - 3	<p><i>sample</i> 03 CZE, Jacket with fur trim, Aikepell</p>  <p>A photograph of a blue quilted jacket with a fur-trimmed hood. A white sample tag with the handwritten text 'K 2402-3' is pinned to the front.</p>	<ul style="list-style-type: none">- alkylphenols (AP) and ethoxylated alkylphenols (APEO)- hexavalent chromium- formaldehyde- polycyclic aromatic hydrocarbons (PAH)

sample number	article	test intention
<p>K 2402 FL - 4</p>	<p><i>sample</i> 04 CZE, Jacket with fur trim, Moncler</p> 	<ul style="list-style-type: none"> - alkylphenols (AP) and ethoxylated alkylphenols (APEO) - hexavalent chromium - formaldehyde - polycyclic aromatic hydrocarbons (PAH)
<p>K 2402 FL - 5</p>	<p><i>sample</i> 05 CZE, Cap with bobble, pink</p> 	<ul style="list-style-type: none"> - alkylphenols (AP) and ethoxylated alkylphenols (APEO) - hexavalent chromium - formaldehyde - polycyclic aromatic hydrocarbons (PAH)
<p>K 2402 FL - 6</p>	<p><i>sample</i> 06 CZE, Cap with bobble, blue</p> 	<ul style="list-style-type: none"> - alkylphenols (AP) and ethoxylated alkylphenols (APEO) - hexavalent chromium - formaldehyde - polycyclic aromatic hydrocarbons (PAH)

2 Methods

2.1 Test method for analysis of nonyl phenols and octyl phenols

Referring to DIN EN ISO 18218-2:2015-11

1. Extraction with acetonitrile by ultrasonic bath
2. Quantitative examination with GC-MS

2.2 Test method for analysis of ethoxylated nonyl phenols and octyl phenols

Referring to DIN EN ISO 18218-2:2015-11

1. Extraction with acetonitrile by ultrasonic bath
2. Conversion into NP and OP with aluminium triiodide as cleavage agent
2. Quantitative examination based on Ethylan 77 and Triton X 100 with GC-MS

2.3 Test method for analysis of hexavalent chromium

The test is carried out according to ASU B 82.02-11:2008-10, in dependence on DIN EN ISO 17075:2008-2

2.4 Test method for analysis of formaldehyde

In accordance to DIN EN ISO 17226-1:2008-8

2.5 Test method for analysis of polycyclic aromatic hydrocarbons (PAH)

1. Extraction by Soxhlet with toluene
2. Filtration by mini-silicagel column
3. Separation, identification and quantification with capillary gas chromatography GC/MS

3 Results

3.1 Result of alkylphenols and ethoxylated alkylphenols

Parameter	K 2402 FL - 1 Jacket with fur trim, icepeak [mg/kg]	K 2402 FL - 2 Jacket with fur trim, Poivre Blanc [mg/kg]	K 2402 FL - 3 Jacket with fur trim, Aikepell [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]	requirements GOTS [mg/kg]
Nonylphenols	3	6	5	3	50	
Oktylphenols	n.d.	n.d.	n.d.	3	∑ 100	∑ 20
Ethoxylated nonylphenols	1400	1000	540	5		
Ethoxylated oktylphenols	n.d.	n.d.	n.d.	5		

Parameter	K 2402 FL - 4 Jacket with fur trim, Moncler [mg/kg]	K 2402 FL - 5 Cap with fur bobble, pink [mg/kg]	K 2402 FL - 6 Cap with fur bobble, blue [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]	requirements GOTS [mg/kg]
Nonylphenols	3	5	8	3	50	
Oktylphenols	n.d.	n.d.	n.d.	3	∑ 100	∑ 20
Ethoxylated nonylphenols	1200	130	1000	5		
Ethoxylated oktylphenols	n.d.	n.d.	n.d.	5		

n.d. = not detected mg/kg = milligram per kilogram DL = detection limit
IVN = Internationaler Verband der Naturtextilwirtschaft e.V., Richtlinie Naturleder, Version 3.0
GOTS = Global Organic Textile Standard, Version 4.0

3.2 Results of hexavalent chromium

Parameter	K 2402 FL - 1 Jacket with fur trim, icepeak [mg/kg]	K 2402 FL - 2 Jacket with fur trim, Poivre Blanc [mg/kg]	K 2402 FL - 3 Jacket with fur trim, Aikepell [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]
chromium VI	n.d.	n.d.	n.d.	3	≤ 3

Parameter	K 2402 FL - 4 Jacket with fur trim, Moncler [mg/kg]	K 2402 FL - 5 Cap with fur bobble, pink [mg/kg]	K 2402 FL - 6 Cap with fur bobble, blue [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]
chromium VI	n.d.	n.d.	n.d.	3	≤ 3

n.d. = not detected mg/kg = milligram per kilogram DL = detection limit
IVN = Internationaler Verband der Naturtextilwirtschaft e.V., Richtlinie Naturleder, Version 3.0

3.3 Results of formaldehyde

Parameter	K 2402 FL - 1 Jacket with fur trim, icepeak [mg/kg]	K 2402 FL - 2 Jacket with fur trim, Poivre Blanc [mg/kg]	K 2402 FL - 3 Jacket with fur trim, Aikepell [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]	requirements GOTS [mg/kg]
formaldehyde	170	92	150	3	≤ 50	< 16

Parameter	K 2402 FL - 4 Jacket with fur trim, Moncler [mg/kg]	K 2402 FL - 5 Cap with fur bobble, pink [mg/kg]	K 2402 FL - 6 Cap with fur bobble, blue [mg/kg]	DL [mg/kg]	requirements IVN leather [mg/kg]	requirements GOTS [mg/kg]
formaldehyde	250	180	160	3	≤ 50	< 16

n.d. = not detected mg/kg = milligram per kilogram DL = detection limit
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GOTS = Global Organic Textile Standard, Version 4.0

3.4 Results of PAH

Parameter	K 2402 FL - 1	K 2402 FL - 2	K 2402 FL - 3	DL	requirements IVN leather	requirements GOTS
	Jacket with fur trim, icepeak	Jacket with fur trim, Poivre Blanc	Jacket with fur trim, Aikepell	[mg/kg]	[mg/kg]	[mg/kg]
Naphthalene	0,14.	n.d.	0,30	0,05	-	< 1,0
Acenaphthelene	n.d.	n.d.	n.d.	0,05	-	< 1,0
Acenaphthene	n.d.	n.d.	0,07	0,05	-	< 1,0
Fluorene	0,08	n.d.	0,21	0,05	-	< 1,0
Phenanthrene	0,35	0,11	1,20	0,05	-	< 1,0
Anthracene	n.d.	n.d.	0,07	0,05	0,1	< 1,0
Fluoranthene	0,12	0,07	n.d.	0,05	-	< 1,0
Pyrene	0,35	0,06	1,90	0,05	-	< 1,0
Chrysene	n.d.	n.d.	0,07	0,05	0,2	< 1,0
Benzo(a)anthracene	0,09	n.d.	0,18	0,05	0,2	< 1,0
Benzo(b)fluoranthene	n.d.	n.d.	n.d.	0,05	0,2	< 1,0
Benzo(j)fluoranthene	n.d.	n.d.	n.d.	0,05	0,2	< 1,0
Benzo(k)fluoranthene	n.d.	n.d.	n.d.	0,05	0,2	< 1,0
Benzo(e)pyrene	n.d.	n.d.	n.d.	0,1	0,2	< 1,0
Benzo(a)pyrene	n.d.	n.d.	n.d.	0,1	0,2	< 1,0
Indeno(1,2,3-cd)pyrene	n.d.	n.d.	n.d.	0,1	-	< 1,0
Dibenzo(,h)anthracene	n.d.	n.d.	n.d.	0,1	0,2	< 1,0
Benzo(ghi)perylene	0,2	n.d.	0,2	0,1	-	< 1,0
Sum PAH	1,33	0,24	4,2		5	< 10

Parameter	K 2402 FL - 4	K 2402 FL - 5	K 2402 FL - 6	DL	requirements IVN leather	requirements GOTS
	Jacket with fur trim, Moncler	Cap with fur bobble, pink	Cap with fur bobble, blue	[mg/kg]	[mg/kg]	[mg/kg]
Naphthalene	0,07	0,06	0,12	0,05	-	< 1,0
Acenaphthelene	n.d.	n.d.	n.d.	0,05	-	< 1,0
Acenaphthene	n.d.	n.d.	n.d.	0,05	-	< 1,0
Fluorene	0,08	0,07	0,13	0,05	-	< 1,0
Phenanthrene	0,31	0,51	0,76	0,05	-	< 1,0
Anthracene	n.d.	0,07	0,08	0,05	0,1	< 1,0
Fluoranthene	0,08	0,16	0,31	0,05	-	< 1,0
Pyrene	0,14	0,33	0,29	0,05	-	< 1,0
Chrysene	n.d.	0,12	0,09	0,05	0,2	< 1,0
Benzo(a)anthracene	n.d.	0,59	0,16	0,05	0,2	< 1,0
Benzo(b)fluoranthene	n.d.	0,06	0,08	0,05	0,2	< 1,0
Benzo(j)fluoranthene	n.d.	n.d.	n.d.	0,05	0,2	< 1,0
Benzo(k)fluoranthene	n.d.	n.d.	0,06	0,05	0,2	< 1,0
Benzo(e)pyrene	n.d.	0,2	n.d.	0,1	0,2	< 1,0
Benzo(a)pyrene	n.d.	n.d.	n.d.	0,1	0,2	< 1,0
Indeno(1,2,3-cd)pyrene	n.d.	n.d.	n.d.	0,1	-	< 1,0
Dibenzo(,h)anthracene	n.d.	n.d.	n.d.	0,1	0,2	< 1,0
Benzo(ghi)perylene	n.d.	n.d.	n.d.	0,1	-	< 1,0
Sum PAH	0,68	2,2	2,1		5	< 10

n.d. = not detected mg/kg = milligram per kilogram DL = detection limit
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 GOTS = Global Organic Textile Standard, Version 4.0

- End of the ANALYTICAL REPORT -

This examination is only valid in relation to the tested material. This report must not be published partially, only completely.

With best regards
Bremer Umweltinstitut

Ulrike Siemers,
Dipl.-Ing. Chemietechnik (FH), Test director