

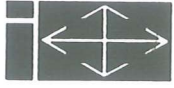
Akkreditiert gemäß
DIN EN 45011

DACH
DAC-ZE-002-08



Deutsche
Akkreditierungsstelle
D-PL-14160-01-00

**ISEGA – Forschungs-
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Aschaffenburg, 17 August 2011

From: Dr. Zechmann
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REPORT

Order No.: 6062/1 **Page 1 of 6 pages**

Client: Colombiana Kimberly Colpapel S.A.
Calle 46 # 41-63
Itagui-Antioquia / Colombia

Date of order: 13 April 2011


Receipt of sample material: 22 November 2010

Origin of sample material: From the client

Purpose: Analysis of a nonwoven grade for its compliance with the demands on food contact materials



(Dr. Derra)



(Dr. Zechmann)
Officially certified
and authorized food
chemist

The present report refers exclusively to the samples as laid out therein. Information and statistical data on the results can be obtained on request.

Non-accredited determinations have not been validated at the date of the accreditation. Individual determinations were not intended for accreditation owing to their restricted field of application. In these cases, the necessary accuracy for the evaluation is ensured by the internal quality management system.

Geschäftsführer: Dr. Ralph Derra – Handelsregister: Aschaffenburg HRB 3329

Die Veröffentlichung von Ergebnissen unserer Arbeiten und Gutachten sowie die Verwendung für Werbezwecke bedürfen – auch auszugsweise – unserer schriftlichen Genehmigung

Akkreditiert gemäß DIN EN ISO / IEC 17025 (D-PL-14160-01-00) und gemäß DIN EN 45011 (DAC-ZE-002-08)

Sample Material

For analysis the following sample material was in hand:

Nonwoven grade, white, unprinted **Wypall X80**

Carrying out of the Tests

Examination period: 27 April 2011 to 20 June 2011

1. Determination of the Grammage *

The determination was performed by analogy with DIN EN ISO 536 after conditioning of the sample at 23 °C / 50 % atmospheric humidity which is prescribed as norm climate.

Result: 129 g/m² \triangleq 122 g dry matter/m²

2. Determination of the Moisture Content *

The determination was performed according to DIN EN ISO 638 directly after unpacking the sample.

Result: 4.3 %

3. Preparation of Extracts *

The extracts were prepared according to the "Methods for the examination of consumer goods" following the method B 80.56 of the Official Collection of Analytical Methods according to § 64 LFGB and according to the demands of the standards EN 645, EN 647 and EN 15519.

Water: 24 hours at 23 °C
Isooctane: 2 hours at 20 °C

4. Determination of the Dry Matter in the Water Extract *

The dry matter was determined according to DIN EN 920 after drying at 105 °C.

Result: 1.4 mg/dm² \triangleq 1.1 mg/g dry matter

5. Determination of Methanal (Formaldehyde) in the Water Extract *

The determination was performed photometrically according to the acetylacetone method in conformity with DIN EN 1541. The requirements of the method B 82.02-1 indicated in the Official Collection of Analytical Methods according to § 64 of the LFGB for consumer goods were observed.

Result: not determinable < 0.004 mg/g dry matter

6. Determination of Glyoxal in the Water Extract *

The determination was performed according to the DIN 54603. The demands of the method no. 4.3.2.2. of the loose-sheet collection "Examination of papers and boards intended for food packaging according to the German Recommendation XXXVI" are taken into consideration.

Result: not determinable < 0.005 mg/g dry matter

7. Specific Determination of Primary Aromatic Amines in the Water Extract

The determination was performed by means of HPLC and MS detection.

Result in mg/kg water extract:

Aniline	not detected	< 0.002
4-Aminodiphenyl	not detected	< 0.002
Benzidine	not detected	< 0.002
4-Chloro-o-toluidine	not detected	< 0.002
2-Naphthylamine	not detected	< 0.002
o-Aminoazotoluene	not detected	< 0.002
2-Amino-4-nitrotoluene	not detected	< 0.002
4-Chloroaniline	not detected	< 0.002
2,4-Diaminoanisole	not detected	< 0.002
4,4'-Diaminodiphenylmethane	not detected	< 0.002
3,3'-Dichlorobenzidine	not detected	< 0.002
3,3'-Dimethoxybenzidine	not detected	< 0.002
3,3'-Dimethylbenzidine	not detected	< 0.002
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	not detected	< 0.002
p-Cresidine	not detected	< 0.002
4,4'-Methylene-bis(2-chloroaniline)	not detected	< 0.002
4,4'-Oxydianiline	not detected	< 0.002
4,4'-Thiodianiline	not detected	< 0.002
o-Toluidine	not detected	< 0.002
2,4-Toluylenediamine	not detected	< 0.002
2,4,5-Trimethylaniline	not detected	< 0.002
o-Anisidine	not detected	< 0.002
4-Aminoazobenzene	not detected	< 0.002

8. Determination of Pentachlorophenol (PCP) *

The analysis was made according to DIN EN ISO 15320 by means of gas chromatography in the water extract after concentration at a column and esterification. The detection was performed by means of ECD.

Result: not determinable < 0.005 mg/kg dry matter

9. Determination of the Heavy Metals Contents in the Water Extract *

The determination was performed according to DIN EN 12497 and DIN EN 12498.

Result in mg/kg dry matter:

Cadmium	(Cd):	not determinable	< 0.05
Mercury	(Hg):	not determinable	< 0.025
Lead	(Pb):	not determinable	< 0.5
Chromium	(Cr):	not determinable	< 0.1

10. Determination of the Dry Matter in the Organic Solvent Extract *

The dry matter was determined according to DIN EN 1186 after drying at 105 °C.

Result: not determinable < 0.5 mg/g dry matter

11. IR-Spectroscopic Testing of the Dry Matters from the Water and the Organic Solvent Extract *

The dry matters were ground up with KBr and examined by IR-spectroscopy.

Result: Substances which might endanger health as well as deviations from the composition stated, which are detectable by this method, were not found.

12. Determination of Polychlorinated Biphenyls (PCB) *

The determination was performed according to DIN EN ISO 15318 by means of gas chromatography. The demands of the method B 80.56-1 within the Official Collection of Analytical Methods according to § 64 LFGB for consumer goods are considered. The numbers refer to the Ballschmitter nomenclature.

Result in mg/kg dry matter:

18	2,2',5-Trichlorobiphenyl	not determinable	< 0.01
28	2,4,4'-Trichlorobiphenyl	not determinable	< 0.01
52	2,2',5,5'-Tetrachlorobiphenyl	not determinable	< 0.01
101	2,2',4,5,5'-Pentachlorobiphenyl	not determinable	< 0.01
138	2,2',3,4,4',5'-Hexachlorobiphenyl	not determinable	< 0.01
153	2,2',4,4',5,5'-Hexachlorobiphenyl	not determinable	< 0.01
180	2,2',3,4,4',5,5'-Heptachlorobiphenyl	not determinable	< 0.01

13. Determination of the Transfer of Antimicrobial Constituents *

The determination was made according to DIN EN 1104. Test specimen of a diameter of 10 mm were placed onto an inoculated nutrient medium and then incubated. The inhibition zone is indicated as total diameter (including the test specimen).

Result:

with *Aspergillus niger*: no inhibition zone
with *Bacillus subtilis*: no inhibition zone

i.e.: a transfer of antimicrobial constituents was not detected.

14. Test for Fluorescent Substances *

The test was made by UV irradiation.

Result: The sample did not contain optically brightened fibres.

15. Determination of the Epichlorohydrin Hydrolysis Products *

The analysis was performed in accordance with the Official Collection of Analytical Methods according to § 64 of the LFGB, method B 80.56-2.

A water extract was prepared according to DIN EN 645. The extraction was made according to the method B 80-56-2 with 4 g paper per litre. The determination was performed in the water extract after solid phase extraction by means of gas chromatography.

Result:

1,3-Dichloro-2-propanol:	not detected	<	2	µg/l water extract
3-Monochloro-1,2-propanediol:	not detected	<	2	µg/l water extract

16. Determination of Secondary Aliphatic Amines *

The determination was performed photometrically in the cold water extract calculated as diethylamine.

Result: not determinable < 0.0003 mg/g dry matter

17. Sensory Analysis for Indirect Transition of Taste *

The examination was made according to EN 1230-2.

The sample was stored with drinking water in a sealed household glass in the dark at 23 ± 2 °C for 44 - 48 hours. The humidity in the glass was fixed at 75 %. The sample was not in direct contact with the food. Thus the transition of substances affecting the taste was effected through the air. Subsequently, the taste of the water was evaluated in an extended triangular test according to DIN ISO 4120 by six assessors. Drinking water which had been stored under the same conditions but without the sample was taken as a reference sample.

Result:

A statistically significant off-flavour of the water which had been stored in indirect contact with the sample was noticed in comparison to the reference sample. It was described as taste of plastic.

Evaluation (median): 2.0

Scale of intensity:

- 0 = no perceptible off-flavour
- 1 = off-flavour just perceptible (still difficult to define)
- 2 = moderate off-flavour
- 3 = moderately strong off-flavour
- 4 = strong off-flavour

The accreditation applies to the methods marked with * in the test report (Register no. D-PL-14160-01-00).

End of report