

SGS INSTITUT FRESENIUS GmbH • Postfach 1261 • 65220 Taunusstein

WEPA Hygieneprodukte GmbH
 Mrs. Dr. Stefanie Zumdick
 Rönckhauser Str. 26
 DE-59757 Arnsberg

Zamien Sarkardeh / sl
 Project Manager Hardlines
 Tel.: +49 6128 744-385, Fax: +49 6128 744-534
 Zamien.Sarkardeh@sgs.com
 Consumer and Retail
 Nonfood

Taunusstein, 03/03/2017

Test-report no. 3277960
Test-report version < 1 >

Original Sample ID	Sample Description	Sample Receipt Date
170113099	WEPA Hand Towel Tissue, Recycling, 2ply, white	01/02/2017

General Information

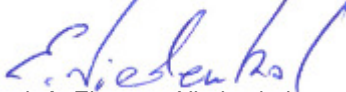


SGS-Client's ID	:	1453600
SGS-Customer-Order	:	4044886
Ordering date	:	31/01/2017
Testing period	:	06/02/2017 – 27/02/2017
Order No.	:	21654495-000-OJ
Testing scope	:	Test according to client's requirements

Assessment

Overall assessment	pass
The tested sample meets the requirements of LFGB and Regulation (EC) No. 1935/2004 in the tested items.	

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 i. A. Eleonore Niedenthal
 (Project Manager)


 i. A. Zamien Sarkardeh
 (Project Manager)

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Summary of results

Test	Result
extractable heavy metals	pass
formaldehyde	pass
glyoxal	pass
Primary aromatic amines	pass
Specific migration of plasticizers	pass
bisphenol A (2,2-bis(4-hydroxyphenyl)propane)	pass
benzophenone	pass
Release of optical brighteners	pass
2,6-diisopropylnaphthalene (DIPN)	pass
Agar diffusion test	pass

Note:

Conclusions on pass/fail are based on the test result from the actual sampling of the received sample(s).

Conclusions are based on the relevant requirements; measurement uncertainties are not taken into account. Only results above the relevant detection limit are taken into account for the calculation of sums.

Test was conducted on composite of random parts of the item as per client's request and the test result is the overall result.

The composite sampling method is based on the client's special request and could be a modification from the testing standard.

For 2-composite mix with results exceeding one half of the relevant requirements or 3-composite mix with results exceeding one third of the relevant requirements, the composite sample may have the possibility of one or more components that can lead to a failure result, it is recommended to test on individual basis.

List of sample parts

Comp. no	Component-ID	Sample-Description	Original Sample ID
1	-	paper, white	170113099

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Analytical results

extractable heavy metals

Test Method

ICP-MS nach DIN EN ISO 17294-2 , after extraktion

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
		1st contact
Lead (Pb)	µg/l	< 3
Cadmium (Cd)	µg/l	< 2
Chromium (Cr) ^[1]	mg/dm ²	< 0.001
Conclusion		Pass

Note:

Requirement::	BfR Recommendation XXXVI:	Lead:	max. 10 µg/l
		Cadmium:	max. 5 µg/l
		Chromium:	max. 0.004 mg/dm ² (Cr (III)) not detectable (Cr (VI))

^[1] = Absence of Chromium indicates absence of Chromium(VI)

formaldehyde

Test Method

SOP M0167, HPLC-UV

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
		1st contact
formaldehyde (50-00-0)	mg/dm ²	< 0.01
Conclusion		Pass

Note:

Requirement:	max. 1 mg/dm ² (BfR Recommendation XXXVI)
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glyoxal
Test Method

SOP M0167, HPLC-UV

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
glyoxal (107-22-2)	mg/dm ²	1st contact < 0.05
Conclusion		Pass

Note:

Requirement: max. 1.5 mg/dm² (BfR Recommendation XXXVI)

Primary aromatic amines
Test method

Extraction: EN 645, measurement: LC-MS/MS

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
		1st contact
Aniline (62-53-3)	µg/l	< 2
o-toluidine (95-53-4) ^a	µg/l	< 2
m-toluidine (108-44-1)	µg/l	< 2
p-toluidine (106-49-0)	µg/l	< 2
2,4-toluylendiamine (95-80-7) ^a	µg/l	< 2
2,6-toluylendiamine (823-40-5)	µg/l	< 2
o-anisidine (90-04-0)	µg/l	< 2
m-anisidine (536-90-3)	µg/l	< 2
Benzidine (92-87-5) ^a	µg/l	< 2
4,4'-diaminodiphenylmethane (101-77-9)	µg/l	< 2
4,4'-oxydianiline (101-80-4)	µg/l	< 2
4-chloroaniline (106-47-8) ^a	µg/l	< 2
3-chloroaniline (108-42-9)	µg/l	< 2
p-kresidine (120-71-8) ^a	µg/l	< 2
4-chloro-o-toluidine (95-69-2) ^a	µg/l	< 2
2-naphtylamine (91-59-8) ^a	µg/l	< 2
4-aminodiphenyle (92-67-1) ^a	µg/l	< 2
4-aminoazobenzene (60-09-3) ^a	µg/l	< 2
3,3-dimethylbenzidine (119-93-7) ^a	µg/l	< 2
4,4' - thiodianiline (139-65-1)	µg/l	< 5
3,3'-dimethyl-4,4'- diaminodiphenylmethane (838-88-0) ^a	µg/l	< 2
3,3-dimethoxybenzidine (119-90-4) ^a	µg/l	< 2
3,3-dichlorobenzidine (91-94-1)	µg/l	< 2

SGS Institut Fresenius GmbH, Im Maisel 14, D-65232 Taunusstein

The analytical findings are only valid for the sample as analyzed. Written acknowledgement for publication and duplication of our analytical reports for promotional purpose, as well as fractional use for other purposes mandatory. Electronically submitted results are for your information only. For legally binding results refer to the originally signed analytical report. Numbers following „<“ represent limits of quantification. Determination of parameters marked with * was performed with a cooperation partner. Please note that the analysis was fully or partially conducted at the laboratory facilities of Institut Fresenius which are accredited according to DIN EN ISO/IEC 17025. These laboratory facilities are not explicitly accounted as GMP-areas.

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4,4'-methyl-bis(2-chloroaniline) (101-14-4)	µg/l	< 2
1,4-phenylenediamine (106-50-3)	µg/l	< 2
1,2-phenylenediamine (95-54-5)	µg/l	< 2
2,4,5-trimethylaniline (137-17-7)	µg/l	< 2
o-aminoazotoluene (97-56-3)	µg/l	< 2
2,4-diaminoanisol (615-05-4) ^a	µg/l	< 2
2-amino-4-nitrotoluene (99-55-8)	µg/l	< 2
2,6-dimethylaniline (87-62-7)	µg/l	< 2
2,4-dimethylaniline (95-68-1)	µg/l	< 2
1,5-diaminonaphthalene (2243-62-1)	µg/l	< 2
4-chloro-o-toluidine (95-69-2)	µg/l	< 2
4,4'-methylen-bis(3-chloro-2,6-diethylaniline (106246-33-7)	µg/l	< 2
2,4-diamino-6-phenyl-1,3,5-triazine (91-76-9)	µg/l	< 2
4-ethoxyaniline (156-43-4)	µg/l	< 2
3-amino-4-methoxybenzaniide (120-35-4)	µg/l	< 2
2-methoxy-4-nitroaniline (97-52-9)	µg/l	< 5
5-amino-6-methylbenzimidazolone (67014-36-2)	µg/l	< 5
4-aminobenzamide (2835-68-9)	µg/l	< 5
3-amino-4-methylbenzamid (19406-86-1)	µg/l	< 5
2-chloroaniline (95-51-2)	µg/l	< 10
2-ethoxyaniline (94-70-2)	µg/l	< 5
5-chloro-2-methylaniline (95-79-4)	µg/l	< 5
1,3-diiminoisoindolene (3468-11-9)	µg/l	< 5
5-chloro-2-methoxyanilin (95-03-4)	µg/l	< 5
2,5-dichloroaniline (95-82-9)	µg/l	< 10
2-chloro-4-nitroaniline (121-87-9)	µg/l	< 5
4-chloro-2,5-dimethoxyaniline (6358-64-1)	µg/l	< 5
2,4,5-trichloroaniline (636-30-6)	µg/l	< 10
4-chloro-3-methoxyaniline (13726-14-2)	µg/l	< 10
2,4-dinitroaniline (97-02-9)	µg/l	< 5
4-aminotoluene-3-sulfonic acid (88-44-8)	µg/l	< 5
2-amino-1-naphthalinesulfonic acid (81-16-3)	µg/l	< 5
Sum	µg/l	
Conclusion		pass

For the summation only results above the reporting limit are taken into account.

Requirement: not detectable (Sum <10 µg/l based on Regulation (EU) No. 10/2011) (BfR Recommendation XXXVI)
 < 2 µg/l for the marked substances (^a) (BfR Recommendation XXXVI)

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Phthalates

Test Method

extraction: EN 645, measurement: GC-MS

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
		1 st contact
Di-(2-ethylhexylphthalate (DEHP) (117-81-7)	mg/kg test simulant	< 0.05
Dibutylphthalate (DBP) (84-74-2)	mg/kg test simulant	< 0.05
Diisobutylphthalate (DIBP) (84-69-5)	mg/kg test simulant	< 0.05
Beurteilung / Conclusion		pass

Requirement: BfR Recommendation XXXVI: DEHP: max. 1.5 mg/kg test simulant
DBP: max. 0.3 mg/kg test simulant
DIBP: max. 0.3 mg/kg test simulant
DBP+DIBP: max. 0.3 mg/kg test simulant

bisphenol A (2,2-bis(4-hydroxyphenyl)propane)

Test Method

SOP M3244, LC-DAD

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
		1st contact
Bisphenol A (80-05-7)	mg/kg	0.2
Conclusion		Pass

Note:

Requirement: max. 0.6 mg/kg test simulant (BfR Recommendation XXXVI)

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benzophenone

Test Method

SOP M3242, fl./fl. Extr. GC-MS

simulant	water
duration	24 hours
temperature	22 +/- 2 °C
approach	EN 645 (40 g/L)

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
Benzophenone (119-61-9)	mg/kg	1st contact
Conclusion		< 0.1 Pass

Note:

Requirement: max. 0.6 mg/kg test simulant (BfR Recommendation XXXVI)

Release of optical brighteners

Test Method

EN 648

Condition			
short term contact	10	minutes	22°C

<u>Teilprobe(n) / Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
water	Assessment	5
3 % acetic acid	Assessment	5
saliva solution	Assessment	5
oil	Assessment	5
Conclusion		pass

Requirement: no release of optical brighteners; assessment min. 5 (BfR Recommendation XXXVI)

2,6-diisopropylnaphthalene (DIPN)

Test Method

DIN EN 14719:2005-10 , Pulp, paper and board - Determination of the Diisopropylnaphthalene (DIPN) content by extraction with dichloromethane and GC-MS

<u>Subsample(s)</u>	<u>Unit</u>	<u>Result</u>
		1
2,6 - Diisopropylnaphthalene (DIPN) (24157-87-1)	mg/kg	< 3.0
Conclusion		Pass

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Note:

Requirement: as low as technically feasible (< 50mg/kg) (based on Recommendation XXXVI)

Agar diffusion test

Test method
 DIN EN 1104

Subsample(s)

Bacillus subtilis
 Aspergillus niger
 Conclusion

Result

1

no inhibition zone
 no inhibition zone
 Pass

Requirement: no inhibition zone may be observed (BfR Recommendation XXXVI)

*** End of test report ***