

INSTITUT FRESENIUS

SGS INSTITUT FRESENIUS GmbH· Postfach 1261 · 65220 Taunusstein

MetPro Verpackungs-Service GmbH Mr. Marc Rapp Robert-Bosch-Straße 17 **D-71707 Schwieberdingen** Order no.:3029343 Client:10124891

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Consumer Testing Services Non Food

SGS INSTITUT FRESENIUS GmbH Im Maisel 14 D-65232 Taunusstein

Taunusstein, July 10, 2014

Your order	:	Testing according to MetPro BioCor 311 HP
Your reference	:	Marcel Graul
Order date	:	06/JUN/2014
Sample no.	:	140650033
Test period	:	10/JUN/2014 - 09/JUL/2014

Test report no.: 3029343-01_rev01 Testing according to LFGB

Dear Mr. Rapp,

Following your request we have tested the sample received on June 10, 2014 according to the "Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuches (LFGB) and Regulation (EC) No. 1935/2004.

Sample no.	Sample designation
140650033	BioCor 311 HP (VCI-Folie)

Detailed results are given on the following page(s).

Assessment:

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

Yours sincerely,

SGS INSTITUT FRESENIUS GmbH

i. V. Dr. Nadine Paul (Team Leader)

i. A. Zamien Sarkardeh (Project Manager)

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Member of the SGS Group (Société Générale de Surveillance)

Die Prüfergebnisse beziehen sich auf die untersuchten Proben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung. Alle Dienstleistungen werden auf Grundlage der anwendbaren Allgemeinen Geschäftsbedingungen der SGS, die auf Anfrage zur Verfügung gestellt werden, erbracht.

Geschäftsführer: Vincent Giesue Furnari, Aufsichtsratvorsitzender: Dirk Hellemans, Sitz der Gesellschaft: Taunusstein, HRB 21543 Amtsgericht Wiesbaden



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Photo documentation:

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Test results:

1. Migration

The sample was brought in contact with the respective simulant and stored. The ratio of surface to volume is 6 dm²/l.

Water	10 days at 40 ℃
3 % acetic acid	10 days at 40 °C
95 % ethanol	10 days at 40 ℃
Isooctane	2 days at 40 ℃

1.1 Sensory test

The migrates have been sensory tested according to DIN 10955 for off-odour and off-taste in comparison to a blank. This is a similar treated food simulant without sample contact.

Food simulant	Average grade*	
	odour	taste
Water	1.0	1.5

* rounded at 0.5 grades

Key:

0	=	no change
1	=	very slight off odour/ off-taste
2	=	slight off-odour / off-taste
3	=	distinct off-odour / off-taste
4		atrana off adaur / off taata

strong off-odour / off-taste 4

With an assessment from 0 to 2.5 there is no, respectively a tolerable organoleptic impact existent in terms of Regulation (EC) No. 1935/2004.

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1.2 **Overall migration**

The migrates (point 1) have been dried at 105 ℃ and the overall migration was determined as dry residue according to EN 1186.

test liquid	Result [mg/dm ²]	Requirement* [mg/dm ²]
3 % acetic acid	< 1	max. 10
95% ethanol	< 1	max. 10
isooctane	2	max. 10

* according to Regulation (EU) No. 10/2011 and amendments

analytical tolerance of the method (§ 64 LFGB B 80.30-3 (EG)): 2 mg/dm² for aqueous simulants 3 mg/dm² for olive oil and fat substitutes

1.3 Specific migration of zinc

The determination was carried out on the migrate after extraction with ICP-OES.

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % ethanol	<1	max. 25

* according to Regulation (EU) No. 10/2011 and amendments

1.4 Specific migration of Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

The determination was carried out on the migrate after extraction by GC-MS.

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % ethanol	< 0.5	max. 6

* according to Regulation (EU) No. 10/2011 and amendments

Specific migration of substance A 1.5

The determination was carried out on the migrate.

	Result
substance A	meets the requirement

* according to Regulation (EU) No. 10/2011 and amendments

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Specific migration of 2,6-Di-tert-butyl-kresol (BHT) 1.6

The determination was carried out on the migrate by GC-MS after extraction.

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % ethanol	< 0.1	max. 3

* according to Regulation (EU) No. 10/2011 and amendments

1.7 Specific migration of acrylates and methacrylates

The determination was carried out on the migrate by GC-FID.

95 % ethanol	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
acrylates / methacrylates**	< 5	max. 6

* according to Regulation (EU) No. 10/2011 and amendments

** sum of: methacrylate, acrylic acid methyl ester, acrylic acid ethyl ester, methacrylic acid methyl ester, acrylic acid isobutyl ester, acrylic acid n-butyl ester, methacrylic acid isobutyl ester, methacrylic acid butyl ester, acrylic acid ethylhexyl ester

1.8 Specific migration of N,N-Bis-(2-hydroxyethyl)-alkyl(C₈-C₁₈)amine

The determination was carried out on the migrate with HPLC-ELSD and external standardisation.

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % ethanol	< 1	max. 1.2

* according to Regulation (EU) No. 10/2011 and amendments

1.9 Spezifische Migration von 1,3,5-Tris(3,5-di-tert-butyl-4-hydroxybenzyl)-1,3,5-triazin-2,4,6 (1H, 3H, 5H)trion

The determination was carried out on the migrate with GC-MS after extraction

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % ethanol	< 0.01	max. 5

* according to Regulation (EU) No. 10/2011 and amendments

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1.10 Specific migration of Monoethyl-3,5-di-tert-butyl-4-hydroxy-benzyl-phosphonate, calcium salt

The determination was carried out on the migrate after extraction by LC-MS/MS.

	Result [mg/kg food simulant]	Requirement* [mg/kg food simulant]
95 % Ethanol	< 0.1	max. 6

* according to Regulation (EU) No. 10/2011 (and amendments)

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