TRISKELION
RESEARCH FOR BETTER LIVING

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To whom it may concern

Vetropack Moravia Glass akciová společnost, Kyjov, Czech Republic has requested Triskelion to verify whether their product is suitable for contact with all types of food for any storage period at any temperature, in view of the EU Regulation, Dutch legislation.
For this purpose, samples were provided.
Project details are as follows:

Project number	:	P10336-123
Sample number	:	ANA.2017-3089/002
Sample description	:	Transparent clear bottle, content 0.25L
Client	:	**Vetropack Moravia Glass akciová společnost, Kyjov, Czech Republic**
Sample description	:	**Flint Bottle**
Sampled by	:	Client
Sample received on	:	June 2017
Date of issue	:	July 2017
Validity period	:	July 2017 – July 2023
Evaluation	:	This investigation must be re-evaluated if the relevant regulation is changed, or the composition or the production process of the product is changed, or at July 2020 the latest.

Tests and Regulations:
The tests performed were in line with the requirements of the Regulations (EU) No 10/2011 up to and including amendment (EU) No 2017/752 of 28 April 2017 and the Commodity Act Packaging and Food Utensils Regulation of The Netherlands and its amendments up to and including 1028394-156011-VGP of 26 October 2016 (hereinafter called 'Regulations').

The investigation comprised the following determinations:
- Overall migration into 3% acetic acid after 4 hours contact at 100°C

Results:
The results were described in detail in analytical report PM/17-0580B/VeH. In summary it is stated that the values obtained for the overall migrations and relevant specific migrations meet the limits of the 'Regulations'.

Conclusion:
Given the values obtained for the relevant overall and specific migrations and residual content, the 'Sample' can be considered to be suitable for contact with all types of food for any storage period at any temperature in view of the 'Regulations'.

Approved by:

H.M. Veenendaal
Project Manager Food Contact Materials

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Analytical report

Project data

Analysis requested	:	Food approval according to EU and Dutch legislation
Client	:	Vetropack Moravia Glass akciová společnost, Kyjov, Czech Republic
Project number	:	P10336-123
Date of issue	:	July 2017
Validity	:	July 2017 – July 2023
Evaluation	:	This investigation must be re-evaluated if the relevant regulation is amended, or the composition or production process of the product is changed, or by July 2020 the latest.

Sample data

The following sample was analyzed (hereafter called 'Sample'):

Sampled by	:	Client
Description client	:	Flint Bottle
Sample code Triskelion	:	ANA.2017-3089/002
Sample description	:	Transparent clear bottle, content 0.25L
Sample received at	:	6 June 2017

Legislative context

The report, the experiments described and the conditions used to obtain the results presented are based on the following legislation:

- Commodity Act Packaging and Food Utensils Regulation of The Netherlands of 20 November 1979 and its amendments up to and including 1028394-156011-VGP of 26 October 2016
- Regulation on plastic materials and articles intended to come into contact with food (EU) No 10/2011 of 14 January 2011 and its amendments up to and including (EU) No 2017/752 of 28 April 2017
- Regulation (EC) No 1935/2004 of 27 October 2004
- EU Directive 94/62/EC of 20 December 1994

An interpretation of the above legislation was made for the product to be investigated, as is outlined below. The interpretation was used for the administrative check, the selection of the tests and the evaluation of the results. In the report the legislation used for this interpretation will be referred to as 'Relevant Legislation'.

Glass articles are only regulated on European level by article 3 of the framework Regulation (EC) No 1935/2004 (food contact materials may not endanger human health and bring about an unacceptable change in the composition of foodstuffs). In the Netherlands glass articles are

regulated in chapter (V) (glass and glass ceramics) of the Commodity Act Packaging and Food Utensils Regulation of The Netherlands.

To be able to state that the material can be considered as not-detrimental to human health, the overall migration and the specific migration of all elements with a specific migration limit are determined.

Because a food approval was requested by the client, Triskelion has selected which experiments had to be performed (overall and specific migrations, residual contents, extraction tests, etc. as described in detail in the method section) based on the information that was supplied about the composition, the application of the 'Sample' and the legislation with which the 'Sample' has to comply.

Methods applied

Migration conditions
To determine the overall and specific migration from the 'Sample', specimens were filled with 300 ml of 3% acetic acid and stored for 4 hours at 100°C. The contact area of the sample was 2.24 dm^2.

The simulants, contact time, and contact temperature were selected according Regulations (EU) No 10/2011 on plastic materials and articles intended to come into contact with food and following CEN method EN 1186-1:2002 (17 April 2002) and CEN method EN 13130-1:2004 (26 May 2004). After the storage period the samples were analyzed as described in the overall and specific migration section.

Overall migration
After the storage period, the overall migration from the 'Sample' was determined following the CEN method EN 1186-9:2002 (17 April 2002) (article filling, aqueous simulant) as close as possible.

Specific migration
The specific migrations were determined following the CEN method EN 13130-1:2004 (26 May 2004) as close as possible. A summary of the specific migrations is shown in the following table:

Compound	Simulant	Time/temperature conditions	Analytical technique
antimony, arsenic, barium, boron, cadmium, cerium, chromium, cobalt, lithium, lead, manganese, nickel, rubidium and zirconium	3% acetic acid	4 hours 100°C	ICP-MS
fluoride	3% acetic acid	4 hours 100°C	GC

ICP-MS = inductively coupled plasma mass spectrometry, GC = gas chromatography.

Results

Overall migration from the 'Sample' after contact time and temperature as described above

Simulant	Overall migration (mg/dm^2)			
	Result 1	Result 2	Average	Limit
3% acetic acid	n.d.(<1.0)	n.d.(<1.0)	n.d.(<1.0)	10

n.d. = not detectable

Specific migration from the 'Sample' after contact time and temperature as described above

	Specific migration (mg/6dm^2)			
Component	Result 1	Result 2	Average	Limit
antimony	n.d.(<0.0006)	n.d.(<0.0006)	n.d.(<0.0006)	0.04
arsenic	n.d.(<0.001)	n.d.(<0.001)	n.d.(<0.001)	0.01
barium	0.01	0.01	0.01	1
boron	n.d.(<0.03)	n.d.(<0.03)	n.d.(<0.03)	1
cadmium	n.d.(<0.0006)	n.d.(<0.0006)	n.d.(<0.0006)	0.01
cerium	n.d.(<0.0006)	n.d.(<0.0006)	n.d.(<0.0006)	1
chromium	n.d.(<0.001)	n.d.(<0.001)	n.d.(<0.001)	0.1
fluoride	n.d.(<0.06)	n.d.(<0.06)	n.d.(<0.06)	1
cobalt	n.d.(<0.0006)	n.d.(<0.0006)	n.d.(<0.0006)	0.05
lithium	n.d.(<0.003)	n.d.(<0.003)	n.d.(<0.003)	0.6
lead	n.d.(<0.001)	n.d.(<0.001)	n.d.(<0.001)	0.1
manganese	n.d.(<0.0006)	n.d.(<0.0006)	n.d.(<0.0006)	0.6
nickel	n.d.(<0.003)	n.d.(<0.003)	n.d.(<0.003)	1
rubidium	n.d.(<0.003)	n.d.(<0.003)	n.d.(<0.003)	1
zirconium	n.d.(<0.003)	n.d.(<0.003)	n.d.(<0.003)	2

n.d. = not detectable

Conclusions

Based on the information that was supplied about the composition, the application of the 'Sample' and 'Relevant Legislation', all relevant tests were selected and performed (overall and specific migrations, residual contents, extraction tests etc. as described in detail in the method section).

The values obtained for the overall migrations and relevant specific migrations from the 'Sample', into 3% acetic acid after a contact period of 4 hours at 100°C meet the limits as specified in the 'Relevant Legislation'.

In conclusion, the 'Sample' can be considered to be suitable for contact with all kinds of foodstuff for any time at any temperature regarding the relevant overall migrations, the relevant specific migrations, and the relevant residual contents as described above, according to the Commodity Act Packaging and Food Utensils Regulation of The Netherlands and its amendments up to and including 1028394-156011-VGP for both single and repeated use.

The product must be tested in the final application for deterioration in the organoleptic characteristics of the food (according to the requirements of Article 3 of the Regulation (EC) No 1935/2004).

Supporting documents with all details of the analytical experiments will be filed for a period of six years and can be accessed by enforcement authorities upon agreement of the client.

Approved by

H.M. Veenendaal
Project Manager Food Contact Materials