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Certificate

Food regulatory evaluation of ViskoTeepak's "Fibrous EPG" cellulose casing

Client:	ViskoTeepak Belgium NV BE-3920 Lommel
Order:	PA/4674/15
Samples:	Cellulose casing "Fibrous EPG"

Scope and sample material

ViskoTeepak's casing "Fibrous EPG" is a cellulose based casing. The intended applications include the packaging of meat and sausage products (see table 1 of test reports PA/4674/15).

Compliance of the cellulose casings with the regulatory requirements of Article 3 of the EU Framework Regulation (EC) No 1935/2004 was investigated. For this purpose ViskoTeepak disclosed the formulation of the cellulose casing and the coating supplier disclosed the formulation of used coating system to Fraunhofer IVV.

The summary of the food regulatory assessment of the cellulose casing refers to the following Fraunhofer IVV test reports:

- Test report PA/4674/15 part 1 dated 16.2.2016 - Determination of the overall migration from the coated cellulose casing "Fibrous EPG"
- Test report PA/4674/15 part 2 dated 10.2.2016 - Sensory testing of the printed cellulose casing "Fibrous EPG" and "Fibrous casing regular"
- Test report PA/4674/15 part 3 dated 16.2.2016 – Determination of a confidential compound in the coated cellulose casing "Fibrous EPG"
- Test report PA/4674/15 part 5 dated 16.2.2016 – Screening analysis of the silicone coated cellulose casing "Fibrous EPG"

Food regulatory status of the used components

Based on ViskoTeepak's information on the formulation of the cellulose casings the food regulatory status of the used components was evaluated according to European requirements.

- Plastics Regulation (EU) No 10/2011 (last amendment by Regulation (EU) No 2015/174) -Strictly speaking cellulose based casings are not covered by the Plastics Regulation (EU) No 10/2011. However this regulation may also be used for the assessment of other materials than plastics that are not yet regulated on EU level.

- BfR Recommendation XLIV. "Artifical Sausage Casings" (as of 1.10.2014)
- BfR Recommendation XV. "Silicones" (as of 1.10.2014)

Migration analyses

The cellulose casing "Fibrous EPG" was investigated for the overall migration into 10 % ethanol and 3 % acetic acid by total immersion at the contact conditions 4 h by reflux according to the European Standard EN 1186-3. In addition, the overall migration was determined into the food simulants 95 % ethanol and isooctane (as alternative food simulants for olive oil) by total immersion at the contact conditions 24 hours at 40 °C (95 % ethanol) and 24 h at 60 °C followed 10 d at 40 °C (isooctane) according to the European Standard EN 1186-15 (Fraunhofer IVV test report PA/4674/15 part 1, dated 16.2.2016). The time and temperature conditions applied for the migration tests were determined based on the process cycles as delivered by ViskoTeepak.

In addition, the content of one confidential compound in the cellulose casing was investigated (Fraunhofer IVV test report PA/4674/15 part 3, dated 16.2.2016). Furthermore the cellulose casing "Fibrous EPG" was investigated for possibly migrating components originating from the coating by screening analyses. For this purpose the coated casing was investigated by headspace gas chromatography - flame ionisation detection / mass spectrometry (GC-FID/MS) and dichloromethane resp. 95 % ethanol extracts of the casing were investigated by GC-FID/MS (Fraunhofer IVV test report PA/4674/15 part 5, dated 16.2.2016).

Additionally, sausages packed in the coated cellulose casing "Fibrous EPG" were investigated for a change or deterioration of the organoleptic characteristics of the packed sausages. The sensory tests of the sausages were carried out according to DIN 10964 and DIN 10955 by a panel of seven trained testers (Fraunhofer IVV test report PA/4674/15 part 2, dated 10.2.2016).

Food regulatory assessment

The overall migration limit is 10 mg/dm² contact surface according to Art. 12 of the European Plastics Regulation (EU) No 10/2011 (last amendment by Regulation (EU) No 2015/174).
Cellulose casings are not within the scope by the European Plastics Regulation (EU) No 10/2011. However, the overall migration limit (as inertness parameter) can be used for the evaluation of the investigated cellulose casing.

The investigated sample "Fibrous EPG" is in compliance with the overall migration limit for fatty foods (such as ham, salami, bacon, sausages and natural cheese) at cooking applications up to 100 °C for up to 4 hours followed by long term storage at room temperature or below.
The overall migration into aqueous and acidic simulants of the investigated cellulose casing is exceeding the overall migration limit of 10 mg/dm² for plastic material due to the use of glycerol. Glycerol can be used as moisturiser for sausage casing made of regenerated cellulose according to the German BfR Recommendation XLIV "Artificial Sausage Casings" (as of 1.10.2014). Glycerol may be used for the purpose without a specific restriction.

The specific migration of the investigated confidential component complies with the specific limit of this substance according to the German BfR Recommendation XV. "Silicones".
Based on the performed screening and specific migration analyses, the investigated coated cellulose casing "Fibrous EPG" complies with the safety requirements of Article 3 of the EU Framework Regulation (EC) No 1935/2004 with respect to the base materials of the casing and the coating.

According to Article 3 of the EU Framework Regulation (EC) No 1935/2004 and according to § 31 of the German "Lebensmittel- und Futtermittelgesetzbuch" (LFGB) materials and articles in contact with food shall be manufactured so that, under normal or foreseeable conditions of use, they do not transfer their constituents to food in quantities which could bring about a deterioration in the organoleptic characteristics of the food. Based on the performed sensory analysis, the investigated sausage sample packed in the cellulose casing "Fibrous EPG" is in compliance with the sensory requirements of the EU Framework Regulation (EC) No 1935/2004 and of § 31 LFGB.

Conclusion

Based on the results of the migration, screening and sensory analyses as well as on the information on the used materials provided by the client ViskoTeepak and its supplier, we come to the conclusion that the investigated cellulose casing "Fibrous EPG" is in compliance with the requirements of Article 3 of the EU Framework Regulation (EC) No 1935/2004 for the intended packaging of processed meat products (e.g. ham, salami, bacon, sausages) and natural cheeses.

Signatures

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