

TESTING PROTOCOL

No.: **031-en-n/18**

- Customer:** Alpha Packaging International
Oosterbeek Packaging
Maer Flexibles Europe
Bijsterhuizen 2401
6604 LK Wijchen
The Netherlands
VAT NL813756285B01
- Product:** The stand up pouch (Doypack) made of a barrier layered film. Customer designation: OPPMAT20//MPET12//LDPE90 (OPP, Metalized PET,LDPE). Sample labelling in the laboratory: 031/18/2.
- Producer:** See customer.
- Objective:** See testing methods (page 2).
- Processed by:** Lenka Votavová, MSc, PhD
- Appendix:** Appendix no.1 – Testing protocol no. PR1827913, ALS Czech Republic, s.r.o., Na Harfě 336/9, 190 00 Prague 9, Czech Republic.

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Prague, April 9, 2018

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IPL manager

1. Basic information

Sample collection	Samples collected by	Customer
	Date of the collection	None
	Date of the transfer to IPL	March 20, 2018
Used testing methods IPL	–	–
Sub-supplier of the accredited tests	Name, address	ALS Czech Republic, s.r.o., Na Harfě 9/336, CZ-190 00 Prague 9, Czech Republic.
	Tests realized	Determination of aluminium leachable into 3% acetic acid^{S)}.
Date of testing	March 20 – April 6, 2018	
Used devices	–	

^{S)} Made by sub-supplier.

2. Procedure of preparation of the samples for testing

30 pouches were obtained. The sample was tested in an original state.

The test of the specific migration of aluminium was performed according to the European Parliament and Council Regulation (EC) No. 1935/2004 and the Commission Regulation No. 10/2011 as amended. The test conditions were as follows: the real use conditions – the bag was filled with food simulant B(3% acetic acid), migration ratio – $4.3591 \text{ dm}^2/250 \text{ ml}$, contact temperature – $60 \text{ }^\circ\text{C}$; contact time – 240 hr (10 days). The prepared leachate was sent to the sub-supplier for the aluminium determination. The value of the aluminium migration level obtained from the sub-supplier was expressed in milligrams per litre of the food simulant. To express the result of aluminium migration of in the agreement with the requirement of the Commission Regulation No. 10/2011 (Chapter V, Article 17, paragraph 1) the value of sub-supplier was recalculated to milligrams per square decimetre of the sample surface assuming the contact conditions as given above and then to milligrams per kilogram of food simulant applying a surface to volume ratio of 6 dm^2 per kg of food.

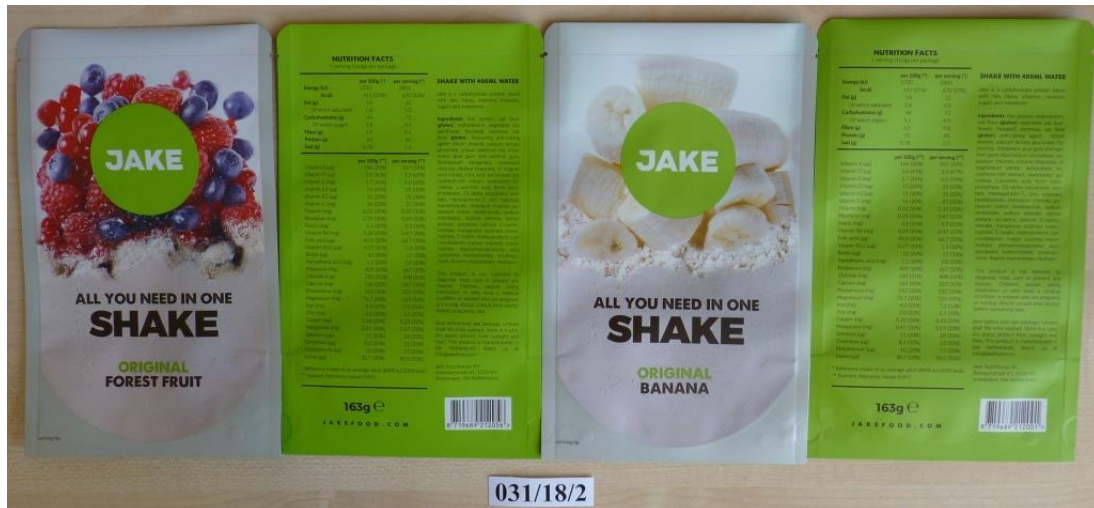


Figure 1 – Tested sample

3. Results

Tested parameter	Unit	Sample	Measurement uncertainty	Limit ^{**)}	Evaluation	
		031/18/2				
Migration of heavy metals from polymer material into 3% acetic acid^{S)} (240 hr/60°C)	Al	mg/kg	< 0.0034 ⁺⁾	*)	1.0	Within limit

Notes:

Symbol „ < “means less than the limit of detection of the method used. (See the testing protocol in appendix no. 1).

⁺⁾ Results of migrations are expressed as the mg/kg of food simulant, applying a surface to volume ratio of 6 dm² per kg of food. The level of Al migration under the conditions close to the real use was <0.010 mg/kg (see the testing protocol in appendix no. 1).

Annotations:

*) See the testing protocol in appendix no. 1.

^{**)} Limit according to the Commission Regulation (EC) no. 10/2011 as amended (Annex II). This limit for aluminium will be obligatory from September 14, 2018.

^{S)} Determined on the base of the results of the sub-supplier.

4. Deviations from recorded testing procedures, additional information

None