



# COBICO®

COBICO Sp. z o.o.  
Przebieczany 529, 32-020 Wieliczka



AB 086

## Tests Report #150363

**A test of a FOOD sprayer - Overall migration, specific migration, a sensory assessment**

**Place of performance of the test:** COBICO Laboratory Przebieczany 529,  
32-020 Wieliczka/PL; Phone +48 12 630-90-91

**Agreement/Order #:** Order: #122/2015/BL

**Date of receipt of the sample:** 06.10.2015

**Date of completion of the test:** 30.10.2015

**The sample identification:** M/300/1/15

### Profile of the sample:

The FOOD sprayer is built from spraying head and tank (capacity series 1.0 dm<sup>3</sup>; 1.5 dm<sup>3</sup>; 2.0 dm<sup>3</sup>):

- head - EP 300K polypropylene (made by injection method)
- tank - Hostalen ACP 5231D polyethylene (made by blow moulding method)
- seals - silicone
- suction tube - polyethylene

The FOOD sprayer intended as reusable one for edible oil, at room temperature.

The test was carried-out on the tank sprayer of 1.0 dm<sup>3</sup> capacity, being a representative one for the capacity series.

### The test method:

PN-EN 1186-1:2005; PN-EN 1186-9:2006; PN-EN 1186-14:2005

Commission Regulation (EU) No 10/2011

DIN 10955:2004 „Sensorische Prüfung - Prüfung von Packstoffen und Packmitteln für Lebensmittel”. (Sensory analysis -Testing of packaging materials and packages for food products).

PN-EN 13130-1:2006, PB-185/HPLC Rev. II of 21.10.2014

### 1.Scope of the Tests:

- 1.1. A sensory assessment
- 1.2. A test of overall migration
- 1.3. A test of specific migration

## 2. Results of the test:

### 2.1 A sensory assessment – flavour and odour transfer

The test was performed based on the guidelines of the Standard DIN 10955:2004 by the 2:5 method.

Conditions of the test:

- test foodstuff - spring water neutral in flavour and odour
- thermostating: 40°C for 10 days.

An assessment of flavour and odour deviations was performed compared with the control sample, i.e. spring water, stored without of contact with the tested tank sprayers according to the 5-point rating scale:

- 0 Not noticeable foreign flavour and odour
- 1 Barely noticeable foreign odour and flavour
- 2 Weakly noticeable odour and flavour
- 3 Clearly noticeable odour and flavour
- 4 Strongly noticeable flavour and odour

No foreign flavour and odour of the water being in contact with the tested tank sprinklers as compared with the control sample (the water without contact with the tank sprayer)-  
**according to the rating scale 0**, has been found.

### 2.2 A test of overall migration - A

The test by the filling method was carried-out three times on the same tested sample using every time a new sample of the food simulant, in the conditions given in the table.

Food simulant	Method of the test	Conditions of the test		Determination of overall migration after:	Overall migration $\text{mg/dm}^2$	Uncertainty $\pm [\text{mg/dm}^2]$	Limit $[\text{mg/dm}^2]$
		Time	Temp. (°C)				
<b>Isooctane</b>	PN-EN 1186-1:2005	2 days	20	Test 1	10.35	0.07	10.00
	PN-EN 1186-9:2006						
<b>Isooctane</b>	PN-EN 1186-14:2005	2 days	20	Test 3	0.88	0.01	

*Given the expanded uncertainty results from a standard uncertainty multiplied by a coverage factor  $k = 2$ , which for a normal distribution provides a level of confidence of approximately 95%.*

### 2.3 A test of specific migration: bis (2-ethylhexyl) phthalate as well as dibutyl phthalate - A - performed by the Subcontractor (AB 079)

The test of the specific migration to isooctane by the filling method was performed three-times on the same tested sample, using every time a new sample of the food simulant.

Thermostating of the tested package with the food simulant was performed at the COBICO Laboratory in the conditions given in the Table.

The determination of bis (2-ethylhexyl) phthalate as well as dibutyl phthalate was performed at the Subcontractor after the 1-st and the 3-rd test.



Type of test	Method	Food simulant	Conditions of the test	Result [ mg/kg ]	Limit [ mg/kg ]
Determination after the 1 test					
Bis (2-ethylhexyl) phthalate	PN-EN 13130-1:2006, PB-185/HPLC REV. II of 21.10.2014	Isooctane	2.5 days 20°C	<0.5	1.5
Dibutyl phthalates		Isooctane	2.5 days 20°C	<0.3	0.3
Determination after the 3 test					
Bis (2-ethylhexyl) phthalate	PN-EN 13130-1:2006, PB-185/HPLC Rev. II of 21.10.2014	Isooctane	2.5 days 20°C	<0.5	1.5
Dibutyl phthalates		Isooctane	2.5 days 20°C	<0.3	0.3

### 3. A conformity assessment

- 3.1.** The result of the sensory assessment has been positive one, no change of odour and flavour of the water being in contact with the tank sprayer relative to the control sample has been found.
- 3.2.** The overall migration to isooctane in the 1-st test has been above the limit, in the 3-rd test has been below the limit. In the 3-rd test the level of the overall migration has fallen relative to the 1-st test.  
The limit of overall migration in compliance with the Commission Regulation (EU) No 10/2011 is 10 mg/dm<sup>2</sup>.
- 3.3** The specific migration of bis (2-ethylhexyl) phthalate and dibutyl phthalate to isooctane in the 1-st test as well as in the 3-rd test has been below the acceptable level.

Date of the Tests Report drafting: 03.11.2015

The way of the Report delivery: By registered letter

The Orderer of the tests has been responsible for the sampling and its representative character.

The COBICO Laboratory performs the tests strictly in compliance with the test procedure.

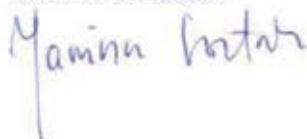
The Test Results refer exclusively to the tested samples.

The Report without written permission of the Laboratory cannot be copied other way but just in its entirety

#### A – Accredited tests

#### Elaborated by:

Janina Szostak



#### Authorised by:

Ewa Kryczko  
Laboratory Director



Distribution List: COBICO Laboratory

- Copy #1