

THE REGIONAL PUBLIC HEALTH AUTHORITY  
IN POPRAD

Zdravotnícka 3525/3, 058 97 Poprad  
LABORATORY RÚVZ IN POPRAD

The National Reference Laboratory  
for materials intended to come into contact with foodstuffs

phone: 00421 52 7722453

e-mail: pp.nrc@uvzsr.sk

www.ruvzpp.sk

EU Network of  
National Reference Laboratories



A – accreditation test  
N – non accreditation test

Test report  
Laboratory analysis results and assessment of safety of product  
Nr. 8238 - 8264/2018

Customer : PANARA, s.r.o.  
Krškanská 21  
949 05 Nitra

Reference number : 177/2018

Date of samples receipt : 09.11.2018

Sampling : sampling by customer (N)

Date of issue : 29.11.2018

Samples title : 1. cup made of granulate NONOILEN IM 3056-2 (white)  
2. cup made of granulate NONOILEN IM 3056-2 (yellow)

Application: *for direct contact with food*

Producer : Panara s.r.o.

### Chemical examination

#### I. Determination of overall migration of substances

Test conditions : three 2 h leachates, 70 °C

Sample no. 1, 2

Ratio surface / volume: 1.58 dm<sup>2</sup> / 200 ml

#### II. Determination of overall, specific migration of substances and sensorial assessment

Test conditions : three 2 h leachates, 60 °C

Sample no. 1, 2

Ratio surface / volume: 1.58 dm<sup>2</sup> / 200 ml

**Sample no. 1 – cup made of granulate NONOILEN IM 3056-2 (white)**

I.

a)

Overall migration of substances (mg.dm <sup>-2</sup> )		
Food simulant	Results	
	1st leachate	3rd leachate
A : 10 % ethanol	< 1.50	< 1.50
B : 3 % acetic acid	< 1.50	< 1.50
D1: 50 % ethanol	8.16	8.10

b)

Content of primary aromatic amines (mg.dm <sup>-2</sup> )		
Food simulant	Results	
	1st leachate	3rd leachate
B : 3 % acetic acid	< 0.00032	< 0.00032

c)

Content of metals (mg.kg <sup>-1</sup> food simulant)		
Food simulant	Results	
	1st leachate	3rd leachate
B : 3 % acetic acid		
Al	< 0.002	< 0.002
Cu	< 0.0006	< 0.0006

d)

Content of metals (mg.kg <sup>-1</sup> food simulant)		
Food simulant	Results	
	1st leachate	3rd leachate
B : 3 % acetic acid		
Cd	< 0.00003	< 0.0003
Pb	< 0.0001	< 0.0001
Cr	< 0.0006	< 0.0006
Ni	< 0.0003	< 0.0003

e)

Sensorial assessment – 1st leachate				
Assessor Nr.	Model substance	Model substance affected by packaging material		
		taste variation	odour variation	favour variation
1.	Drinking water (simulating soft drinks, nonacid foodstuffs, dairy products, fresh meat)	2	2	1
2.		2	2	1
3.		1	1	1
<b>Variation mean total</b>		<b>1.6</b>	<b>1.6</b>	<b>1.0</b>



Sensorial assessment – 3rd leachate				
Assessor Nr.	Model substance	Model substance affected by packaging material		
		taste variation	odour variation	favour variation
1.	Drinking water (simulating soft drinks, nonacid foodstuffs, dairy products, fresh meat)	2	2	1
2.		2	2	1
3.		1	1	1
<b>Variation mean total</b>		<b>1.6</b>	<b>1.6</b>	<b>1.0</b>

**The evaluation of mean total :**

- ≤ 1,8 low probability that material and article will have an unfavourable affect on the organoleptic properties of food and drinking water
- 1,9 - 2,4 material or article may adversely affect the sensory properties of food and drinking water
- > 2,4 high probability that material and article will have an unfavourable affect on the organoleptic properties of food and drinking water

**II.****a)**

Overall migration of substances (mg.dm <sup>-2</sup> )		
Food simulant	Results	
	1st leachate	3rd leachate
95% ethanol	19.87	19.24
isooctane	< 1.50	< 1.50

**b)**

Content of phtalic acid esters (mg.dm <sup>-2</sup> )		
Food simulant	Results	
	1st leachate	3rd leachate
95 % ethanol		
DMP – dimethylphthalate	< 0.006	< 0.006
DEP – diethylphthalate	< 0.004	< 0.004
DIBP – diisobutylphthalate	< 0.006	< 0.006
DBP – dibutylphthalate	< 0.005	< 0.005
BBP – butylbenzylphthalate	< 0.005	< 0.005
DEHP – di(2-ethylhexyl) phthalate	< 0.04	< 0.04
DNOP – di-n-octylphthalate	< 0.006	< 0.006
DINP – diisononylphthalate	< 0.038	< 0.038
DAP – dialylphthalate	< 0,005	< 0,005
DODP – diisodecylphthalate	< 0.0078	< 0.0078
DCHP n- dicyklohexylphthalate	< 0.006	< 0.006

	Laboratory	Technique	Methods	
I. a), II. a)	NRL for materials intended to come into contact with foodstuffs	EN 1186	ŠPP-N3	A
I. b)		spectrophotometric	ŠPP-N16/A	N
I. e)		-	ŠPP-N7	N
I. c) I. d)	Specialised laboratory 1 of chemical analysis	AAS	ŠPP-ŠA2 (Cd, Pb, Cr, Cu, Ni)	A
			ŠPP-ŠA4 (Cu)	N
			ŠPP-ŠA8 (Al)	N
II. b)		HPLC	ŠPP-ŠH6	N

**Sample no. 2 - cup made of granulate NONOILEN IM 3056-2 (yellow)**

**I.**

**a)**

The resistance of pigments and dyes		
Food simulant	Results	
	1st leachate	3rdt leachate
<b>B : 3 % acetic acid</b>	resistant	resistant
<b>D1 : 50 % ethanol</b>	resistant	resistant

**II.**

**a)**

The resistance of pigments and dyes		
Food simulant	Results	
	1st leachate	3rdt leachate
<b>95% ethanol</b>	resistant	resistant
<b>isooctane</b>	resistant	resistant

	Laboratory	Technique	Methods	
I. a)	NRL for materials intended to come into contact with foodstuffs	-	ŠPP-N16	N
II. a)				

ŠA – special analysis, ŠPP – standard operation process

*The test results are relevant solely to the testing samples.*

*This document may not be copied in a shortened form and without the approval of the testing laboratory.*

**Validity:**

**The results of laboratory analyses should be updated if some changes carry out in the manufacturing process which can cause changes in the migration of substances into used food simulators or if there are changes in the current legislative regulations.**



## Assessment of safety of products

*(expression of opinions and interpretations is accredited to accredited tests)*

Samples : cup made of granulate NONOILEN IM 3056-2 (white) and cup made of granulate NONOILEN IM 3056-2 (yellow) were laboratory examined in the accredited testing laboratory at the Regional Public Health Authority seated in Poprad, which was authorised (letter of Ministry of Health of SR no. 15654-3/2007ŠT) as *National Reference Laboratory for materials intended to come into contact with foodstuffs* according Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

Samples – cup made of granulate NONOILEN IM 3056-2 (white) and cup made of granulate NONOILEN IM 3056-2 (yellow) were laboratory tested in accordance with the following legislation laws :

- *Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC*
- *Regulation of Ministry of Agriculture of Slovak republic and Ministry of Health of Slovak republic of 9 June 2003 Nr. 1799/2003-100, which issued the fifth head of the Food Code governing materials and articles intended to come into contact with foodstuffs as amended.*

The conditions of the modeling migration tests and the selection of the foodstuffs simulants in laboratory examination are in compliance with the following legislation law *Commission Regulation (EU) No 10/2011 of 14 January 2011 relating to plastic materials and articles intended to come into contact with food.*

Tested samples : no. 1 - cup made of granulate NONOILEN IM 3056-2 (white) was tested to the following parameters:

- overall migration of substances in 1st and 3rd leachate of the sample to the used food simulants (10% ethanol 3% acetic acid, 50% ethanol) on test condition I.
- overall migration of substances in 1st and 3rd leachate of the sample to the used food simulants (isooctane) on test condition II.
- content of primary aromatic amines in 1st and 3rd leachate of the sample to 3% acetic acid on test condition I.
- content of Al, Cu in 1st and 3rd leachate of the sample to 3% acetic acid on test condition I.
- content of Cd, Pb, Cr, Ni in 1st and 3rd leachate of the sample to 3% acetic acid on test condition I.
- content of phthalic acid esters : DMP – dimethylphthalate, DEP – diethylphthalate, DIBP – isobutylphthalate, DBP – dibutylphthalate, BBP – butylbenzylphthalate, DEHP – di(2-ethylhexyl) phthalate, DNOP – di-n-octylphthalate, DINP – diisononylphthalate, DAP – dialylphthalate, DODP – diisodecylphthalate, DCHP n- dicyklohexylphthalate in 1st and 3rd leachate of the sample to 95 % ethanol on test condition II.
- sensorial assessment of 1st and 3rd leachate of the sample to the used model foodstuffs simulant : drinking water (simulating soft drinks, nonacid foodstuffs, dairy products, fresh meat) on test condition I.

meeting the requirements of the *Commission Regulation (EU) No. 10/2011 of 14 January 2011 relating to plastic materials and articles intended to come into contact with food and amendments Commission Regulation (EU) No. 1282/2011, Commission Regulation (EU) No. 1183/2012, Commission Regulation (EU) No. 202/2014, Commission Regulation (EU) No. 174/2015, Commission Regulation (EU) No. 2016/1416, Commission Regulation (EU) No. 2017/752, Commission Regulation (EU) No. 2018/79, Commission Regulation (EU) No. 2018/213 and Commission Regulation (EU) No. 2018/831.*

Tested samples : no. cup made of granulate NONOILEN IM 3056-2 (yellow) was tested to the following parameters:

- resistance of pigments and dyes in 1st and 3rd leachate of the samples to 3 % acetic acid and 50% ethanol on test condition I.
- resistance of pigments and dyes in 1st and 3rd leachate of the sample to 95% ethanol and isoosctane on test condition II.

meeting the requirements of the *Commission Regulation (EU) No. 10/2011 of 14 January 2011 relating to plastic materials and articles intended to come into contact with food and amendments Commission Regulation (EU) No. 1282/2011, Commission Regulation (EU) No. 1183/2012, Commission Regulation (EU) No. 202/2014, Commission Regulation (EU) No. 174/2015, Commission Regulation (EU) No. 2016/1416, Commission Regulation (EU) No. 2017/752, Commission Regulation (EU) No. 2018/79, Commission Regulation (EU) No. 2018/213 and Commission Regulation (EU) No. 2018/831.*

Following the laboratory examination results and supporting documentations - in term of the health protection - **it is possible to recommended :**

- 1. cup made of granulate NONOILEN IM 3056-2 (white)**
- 2. cup made of granulate NONOILEN IM 3056-2 (yellow)**

produced by Panara s.r.o.

**on direct contact with following types of food :**

- **foods that have a hydrophilic character**
  - **foods that have a lipophilic character**
  - **foods which have a pH below 4.5**
  - **foods with alcohol content up to 70%**
- for cold and hot filling.**



**REGIONAL PUBLIC HEALTH  
AUTHORITY IN POPRAD**  
Zdravotnícka 3, 058 97 Poprad  
**National reference laboratory  
for materials intended to come  
into contact with foodstuffs**

**Mgr. Ing. Milada Syčová, MPH**  
Head of the National reference laboratory  
for materials intended to come  
into contact with foodstuffs