

**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**

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A – accreditation test

N – non accreditation test

TEST REPORT No 7683 – 7686, 8792 – 8795/2022

The results of laboratory analysis and evaluation of safety of the product

The laboratory is accredited by the Slovak National Accreditation Service according to EN ISO / IEC 17025:2017 in accordance with the requirements of the Regulation of the European Parliament and the Council (EC) No 2017/625 of 13 March 2017 as amended.

Name and address of customer : INIPEX s.r.o.
Bajkalská 9/B
831 04 Bratislava
Slovakia

Date of samples receipt : 04.11.2022
Sampling : sampling by customer (N)
Date of finalised of tests : 26.01.2023
Date of issue : 30.01.2023

Samples title : **paper straw:**
1. red colour
2. black colour
3. green colour

Application : on direct contact with food – with cold non-alcoholic and alcoholic beverages up to 14 vol. % alcohol

Producer : INIPEX s.r.o., Bajkalská 9/B, 831 04 Bratislava, Slovakia

Chemical examination

I. Determination of specific migration of substances
Test conditions : 2 hrs ⁺⁵₀ min, (80 ± 2) °C

I. Determination of specific migration of substances and resistance of pigments and dyes
Test conditions : 2 hrs ⁺⁵₀ min, (20 ± 1) °C

sample No 1 – red paper straw

I.

a)

Content of formaldehyde (FCM 98)	
Food simulant	Results (mg/kg)
deionized water	< 3.00

Kind of method, principle	
STN P CEN/TS 13130-23, spectrophotometry (NRL FCM)	N

b)

Content of phenols	
Food simulant	Result (mg/kg)
deionized water	< 0.5

Kind of method, principle	
ŠPP-N4, spectrophotometry (NRL FCM)	N

c)

Content of Cd, Pb, Cr, As, Hg	
Food simulant	Result (mg/kg simulant)
deionized water	
Cd	≤ 0.00003
Pb	≤ 0.0001
Cr	≤ 0.0002
As	≤ 0.0002
Hg	≤ 0.00060

Kind of method, principle	
ŠPP-ŠA2, AAS/ETA (ŠL1CHA)	A
ŠPP-ŠA1, AMA (ŠL1CHA)	N

d)

Content of bisphenol A (FCM 151) (2,2-bis(4-hydroxyphenyl)propane)	
Food simulant	Result (mg/kg)
deionized water	≤ 0.004
C: 20% ethanol	≤ 0.004

Kind of method, principle	
STN EN 15136, HPLC/DAD/FLD (ŠL1CHA)	A

sample No 2 – black paper straw

I.

a)

Content of formaldehyde (FCM 98)	
Food simulant	Results (mg/kg)
deionized water	< 3.00

Kind of method, principle	
STN P CEN/TS 13130-23, spectrophotometry (NRL FCM)	N

b)

Content of phenols	
Food simulant	Result (mg/kg)
deionized water	< 0.5

Kind of method, principle	
ŠPP-N4, spectrophotometry (NRL FCM)	N

c)

Content of Cd, Pb, Cr, As, Hg	
Food simulant deionized water	Result (mg/kg simulant)
Cd	≤ 0.00003
Pb	≤ 0.0001
Cr	≤ 0.0002
As	≤ 0.0002
Hg	≤ 0.00060

Kind of method, principle	
ŠPP-ŠA2, AAS/ETA (ŠL1CHA)	A
ŠPP-ŠA1, AMA (ŠL1CHA)	N

d)

Content of bisphenol A (FCM 151) (2,2-bis(4-hydroxyphenyl)propane)	
Food simulant deionized water	Result (mg/kg)
C: 20% ethanol	≤ 0.004
	≤ 0.004

Kind of method, principle	
STN EN 15136, HPLC/DAD/FLD (ŠL1CHA)	A

II.

a)

Content of primary aromatic amines	
Food simulant deionized water	Result (mg/kg)
	≤ 0.0025

Kind of method, principle	
ŠPP-N6/A, spectrophotometry (NRL FCM)	N

b)

Resistance of pigments and dyes	
Food simulant deionized water	Result
C: 20% ethanol	resistant
	resistant

Kind of method, principle	
ŠPP-N16, (NRL FCM)	N

sample No 3 – green paper straw

II.

a)

Resistance of pigments and dyes	
Food simulant deionized water	Result
C: 20% ethanol	resistant
	resistant

Kind of method, principle	
ŠPP-N16, (NRL FCM)	N

EXPLANATORY NOTES:

Test result given in the form „≤ number“ means ≤ limit of detection (LOD) method of analysis.

Test result given in the form „< number“ means < limit of quantification (LOQ) method of analysis.

ŠPP – standard operation process

*Measures and measuring equipment used for analysis were attested/calibrated in terms of valid metrology regulations.
The test results are relevant solely to the testing samples.*

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Responsibilities for expertise's activities :

- Mgr. Ing. Milada Syčová, MPH, head of National Reference Laboratory for materials intended to come into contact with foodstuff
- Ing. Rastislav Rosipal, head Specialized laboratory 1 chemical analysis

Validity:

The results of laboratory analysis and evaluation of safety of the products in accordance with valid legislation regulation (EC) No 1935/2004 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.

Evaluation of safety of the product

Sample – red, black and green paper straw, was 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.

Sample – red, black and green straw, was 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 No 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 modelling migration tests and the selection of the foodstuffs simulants in laboratory examination are in compliance with the requirements of *Commission Regulation (EU) No 10/2011 of 14 January 2011 relating to plastic materials and articles intended to come into contact with food and its amendments.*

Tested sample No 1 – red paper straw in parameters :

- content of formaldehyde (FCM 98) in sample's leachate into deionized water
- content of phenols in sample's leachate into deionized water
- content of Cd, Pb, Cr, As, Hg in sample's leachate into deionized water
- content of bisphenol A (FCM 151) in sample's leachate into deionized water and 20% ethanol

on test conditions I. meets 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 321/2011, Commission Regulation (EU) No 1282/2011, Commission Regulation (EU) No 1183/2012, Commission Regulation (EU) No 202/2014, Commission Regulation (EU) No 865/2014, Commission Regulation (EU) No 2015/174, Commission Regulation (EU) No 2016/1416, Commission Regulation (EU) No 2017/752, Commission Regulation (EU) No 2018/79, Commission Regulation (EU) No 2018/213, Commission Regulation (EU) No 2018/831, Commission Regulation (EU) No 2019/37, Commission Regulation (EU) No 2019/988, Commission Regulation (EU) No 2019/1338 and Commission Regulation (EU) No 2020/1245.*

Tested sample No 2 – black paper straw in parameters :

- content of formaldehyde (FCM 98) in sample's leachate into deionized water on test conditions I.
- content of phenols in sample's leachate into deionized water on test conditions I.
- content of Cd, Pb, Cr, As, Hg in sample's leachate into deionized water on test conditions I.
- content of bisphenol A (FCM 151) in sample's leachate into deionized water and 20% ethanol on test conditions I.
- content of primary aromatic amines in sample's leachate into deionized water on test conditions II.
- resistance of sample's pigments and dyes in sample's leachate into deionized water and 20% ethanol on test conditions II.

meets 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 321/2011, Commission Regulation (EU) No 1282/2011, Commission Regulation (EU) No 1183/2012, Commission Regulation (EU) No 202/2014, Commission Regulation (EU) No 865/2014, Commission Regulation (EU) No 2015/174, Commission Regulation (EU) No 2016/1416, Commission Regulation (EU) No 2017/752, Commission Regulation (EU) No 2018/79, Commission Regulation (EU) No 2018/213, Commission Regulation (EU) No 2018/831, Commission Regulation (EU) No 2019/37, Commission Regulation (EU) No 2019/988, Commission Regulation (EU) No 2019/1338 and Commission Regulation (EU) No 2020/1245.*

Tested sample No 3 – green paper straw in parameter :

- resistance of sample's pigments and dyes in sample's leachate into deionized water on test conditions II.

meets the requirements of the *Art. 3 of the 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.*

Following the laboratory examination results **the tested samples – red, blue and green paper straw**, produced by company INIPEX s.r.o., Bratislava, Slovakia, **meet the requirements** of the :

- *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*
- *Commission Regulation (EU) No 10/2011 of 14 January 2011 relating to plastic materials and articles intended to come into contact with food and its amendments*

and can be used on direct contact with food – with cold non-alcoholic and alcoholic beverages up to 14 vol. % alcohol.

The evaluation of safety of the product and test report prepared by:



REGIONAL PUBLIC HEALTH
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National reference laboratory
for materials intended to come
into contact with foodstuffs


Mgr. Ing. Milada Syčová, MPH

Head of National reference laboratory
for materials intended to come into contact with foodstuffs

The test report approved by:

RNDr. Denisa Pilková, MPH
Head of Laboratory of RÚVZ in Poprad 