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Test Report

L 1455
Testing Laboratory No. 1455 accredited by ČIA
according to ČSN EN ISO/IEC 17025:2018

Test Report No.	**9332**	Page	1 of 5
Samples No.	**20230177**	Date of issue	**June 5, 2023**
Date of acceptance	May 23, 2023		
Sample Description	Imitation Pearls	Customer	**PRECIOSA ORNELA a.s.**
Date of the test execution	May 24 – June 2, 2023		**Zásada č.p. 317**
			468 25

Results summary:

Required test [A)]	Parameter	Conclusion
1. REACH – Annex XVII, item 63	Lead in mass	PASS
2. REACH – Annex XVII, item 23	Cadmium in mass	PASS
3. REACH – Annex XVII, item 27	Nickel in leach	PASS
4. RoHS - Cd, Cr^{VI}, $Hg^{B)}$, Pb	Elements in mass	PASS
5. CPSIA Section 101 (a)(2)	Cadmium –Migration test, Lead in mass	PASS
6. CPSIA - CPSC 16 CFR 1303	Lead in surface layer	PASS
5. EN 71-3 + A1 part 3	Migration test	PASS
6. ASTM F2923 section 8, 9 a 10	Migration test	PASS
7. ASTM F963 section 4.3.5.; 8.3.1; 8.3.4.	Migration test	PASS

A) The cited standard is in the current version
B) Parameter outside the accreditation scope

Figure 1 Photodocumentation

Description of the decision rule for conformity statements (Conclusion in this test report):
***PASS** – Measured value including measurement uncertainty is lower than the limit.*
***FAIL** – Measured value including measurement uncertainty is higher than or equal to the limit.*

Test Report Approved by:

Name of the authorized person	Position	Signature
Ing Martina Drahovzalová	**Head of Laboratory**	

Results, in this test report, apply only to the samples as received.
This test report shall not be reproduced except in full without approval of the laboratory.
Measurement uncertainty is an expanded measurement uncertainty corresponding to 95% confidence level with an expansion coefficient k = 2.
The laboratory activities were performed in the laboratory facility at the address written above.
Information provided by a customer: Sample description

Table of samples:

Sample No.	Sample description
20230177	Imitation Pearls

Table of results:

1. – 2.

Parameter **Lead in mass**
REACH – Annex XVII, item 63, concerning **Lead** and its compounds
Cadmium in mass
REACH – Annex XVII, item 23, concerning **Cadmium** and its compounds

Test method identification: SPP 020

Apparatus: ICP - OES

Sample No.	Sample description	Pb mg/kg	Limit mg/kg	Conclusion	Cd mg/kg	Limit mg/kg	Uncertainty	Conclusion
20230177	Imitation Pearls	< 40	500	*PASS*	< 40	100	-	*PASS*

3.

Parameter **Nickel in leach**
REACH – Annex XVII, item 27 in its current version concerning the release of nickel content (formerly known as 94/27/ES and its amendment of directive 2004/96/ES)

Test method identification: **SPP 016** (ČSN EN 1811+A1-Determination of nickel released from products coming into direct and prolonged contact with the skin – Reference test method.)

Apparatus: ICP-OES

Sample No.	Sample description	Ni µg/cm²/week	Uncertainty	Limit µg/cm²/week	Conclusion
20230177	Imitation Pearls	**<0,2**	-	<0,5	*PASS*

4.

Parameter **RoHS – Cd, Cr^{VI}, Pb, $Hg^{B)}$**

Test method identification: **SPP 020**(Tested according **ČSN EN 62321** – Determination of certain substances in electrochemical products – Part 5: Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by one of the following methods AAS, AFS, ICP-OES and ICP-MS, if total chromium is detected in the sample, analysis of Cr(VI) content is performed spectrophotometrically using UV/VIS spectrometer.)

Apparatus: ICP–OES

Item	Unit	Sample No.	Uncertainty	*Limit*	Conclusion
		20230177			
Cd	mg/kg	**< 40**	-	*100*	*PASS*
Cr	mg/kg	**< 40**	-	*1000*[C)]	*PASS*[C)]
$Hg^{B)}$	mg/kg	**< 100**	-	*1000*[B)]	*PASS*
Pb	mg/kg	**< 40**	-	*1000*	*PASS*

[B)] *Parameter outside the accreditation scope*

[C)] *Limit applies for Cr(VI), total Cr content was detected that complies to the limit.*

Note: *Directive **2011/65/EU** of the European Parliament and of the Council of June 8, 2011, as amended, restricts the use of certain hazardous substances in electrical and electronic equipment (EEE).*
Determination of phthalates (polybrominated biphenyls, polybrominated diphenyl ethers, Bis phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DIBP)) were not part of the analytical tests. The boiling point of these phthalates is up to 400 °C, while glass melts at much higher temperatures.

5.

Required test: **Cadmium –Migration test, Lead in mass**
Limit is applied to products for children manufactured after 14.8.2011 (act 112-28 (H.R.2715 - 112th Congress), changing CPSIA from 2008 (act 110-314)).

Test method: CPSC – CH - E1002-08.3, Standard Operating Procedure for Determining Total Lead (Pb) in Children's non-metal Products (Including Children's Jewellery).

Test method identification: SPP 016, SPP 020

Apparatus: ICP-OES, ICP-OES

Sample No.	Description	Cd mg/kg	Limit mg/kg	Pb mg/kg	Limit mg/kg	Uncertainty	Conclusion
20230177	Imitation Pearls	**< 10**	75	**< 40**	100	-	PASS

6.

Parameter **Lead in surface layer**

Test method identification: **SPP 020** (CPSC – CH - E1003-09.1, Standard Operating Procedure for Determining Lead (Pb) in Paint and Other Similar Surface Coatings)

Apparatus: ICP-OES

Sample No.	Sample description	Pb mg/kg	Uncertainty	Limit mg/kg	Conclusion
20230177	Imitation Pearls	**< 40**	-	90	*PASS*

7.

Parameter **Migration of certain elements ČSN EN 71-3+A1 part 3**

Test method identification: **SPP 016** (ČSN EN 71-3+A1 part 3 by ICP – OES, if total chromium is detected in the sample, analysis of Cr(VI) content is performed spectrophotometrically using UV/VIS spectrometer).

Apparatus: ICP-OES

Item	Unit	Sample No. 20230177	Uncertainty	*Limit*	Conclusion
Al	mg/kg	**< 100**	-	*70 000*	*PASS*
As	mg/kg	**< 10**	-	*47*	*PASS*
B	mg/kg	**< 100**	-	*15 000*	*PASS*
Ba	mg/kg	**< 100**	-	*18 750*	*PASS*
Cd	mg/kg	**< 10**	-	*17*	*PASS*
Co	mg/kg	**< 10**	-	*130*	*PASS*
Cr	mg/kg	**< 10**	-	*460*	*PASS*
Hg[D)]	mg/kg	**< 10**	-	*60*	*PASS*
Cu	mg/kg	**< 100**	-	*7 700*	*PASS*
Mn	mg/kg	**< 100**	-	*15 000*	*PASS*
Ni	mg/kg	**< 100**	-	*930*	*PASS*
Pb	mg/kg	**< 10**	-	*23*	*PASS*
Sb	mg/kg	**< 100**	-	*560*	*PASS*
Se	mg/kg	**< 100**	-	*460*	*PASS*
Sn	mg/kg	**< 100**	-	*180 000*	*PASS*
Sr	mg/kg	**< 100**	-	*56 000*	*PASS*
Zn	mg/kg	**< 100**	-	*46 000*	*PASS*

[D)] *Parameter outside the accreditation scope*

8.– 9.

Parameter: **Migration of certain elements ASTM F963 section 4.3.5. a 8.3.4.; ASTM F2923 section 8 and 10**

Test method identification: **SPP 016** (Tested according to ASTM F963 section 4.3.5. and 8.3.4.; ASTM F2923 section 8 a 10 a ČSN EN 1811 - Determination of nickel released from products coming into direct and prolonged contact with the skin – Reference test method ICP – OES. If total chromium is detected in the sample, analysis of Cr(VI) content is performed spectrophotometrically using UV/VIS spectrometer.)

Apparatus: ICP-OES

Item	Unit	Sample No. 20230177	Uncertainty	*Limit*	Conclusion
As	mg/kg	**< 10**	-	*25*	*PASS*
Ba	mg/kg	**< 100**	-	*1000*	*PASS*
Cd	mg/kg	**< 10**	-	*75*	*PASS*
Cr	mg/kg	**< 10**	-	*60*	*PASS*
Pb	mg/kg	**< 10**	-	*90*	*PASS*
Sb	mg/kg	**< 10**	-	*60*	*PASS*
Se	mg/kg	**< 10**	-	*500*	*PASS*

Test method identification: **SPP 020** Limits are set to the lead content in mass ASTM F963 section 4.3.5. and 8.3.1.; ASTM F2923 section 5 a 9

Apparatus: ICP-OES

Sample No.	Sample description	Pb mg/kg	Limit mg/kg	Conclusion
20230177	Imitation Pearls	< 40	90	*PASS*

----------*End of Test Report*----------