

Client address

Berry Superfos Lubień Sp Z.o.o.
Kaliska 140
87-840 Lubień Kujawski
Polska

Migration report no. 2994

Date 02-06-2022

1. Sample Information

Project ID	
Report ID	2994
Sample received	28-02-2022
Analysis period	10-03-2022 – 09-05-2022
Sample description <i>(based on Client declaration)</i>	
Sample name	
Product type	PP Plasgran recycled, 100%
Resin 1	
Resin 2	
Masterbatch	
Label	
Other information	



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Senior Scientist

* Not accredited; # Test performed by external provider 1 AB079 JS Hamilton, ul. Chwaszczyńska 180, 81-571 Gdynia

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2. Applied test methods

Method	Parameter	Analysis principle	LOQ OM [mg/dm ²] SM [mg/kg]	U ¹ [%]
PN-EN-1186-3:2005	Overall migration in 3% acetic acid	Gravimetry	1,0	20
PN-EN-1186-3:2005	Overall migration in 50% ethanol	Gravimetry	1,0	20
PN-EN-1186-2:2004	Overall migration in olive oil	Gravimetry and GC-FID	2,2	30
PN-EN-1186-14:2005	Overall migration in isooctane	Gravimetry	2,9	20
PN-EN-13130-1:2004	Preparation of simulant for the migration testing 3% acetic acid	-	-	-
# ¹ PB-204 ed. VI of 05.10.2020	Specific migration of elements	ICP-MS	0,005-0,01	20

3. Test Conditions

Simulant	Migration type ²	Technique	Area exposed [dm ²]	Simulant Volume [mL]	Exposition time [d]	Exposition Temp. [°C]
3% acetic acid	OM	Immersion	2	100	10	40
50% ethanol	OM	Immersion	2	100	10	40
Olive oil	OM	Immersion	2	100	10	40
Isooctane	OM	Immersion	2	100	2	20
3% acetic acid	SM	Immersion	2	100	10	60

4. Results

4.1. Overall migration

Simulant	Average [mg/dm ²]	Single determination values			OML value [mg/dm ²]	Results ³
		[mg/dm ²]	[mg/dm ²]	[mg/dm ²]		
3% acetic acid	<1	<1	<1	<1	10.0	Pass
50% ethanol	<1	<1	<1	<1	10.0	Pass
Olive oil	6,9	7,3	6,5	7,0	10.0	Pass
Isooctane	5,3	5,3	5,3	5,3	10.0	Pass

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4.2. Specific migration

Parameter	Food simulant	Identification Cas No. Ref No.	Average [mg/kg]	SML value [mg/kg]	Results ^{3,4}
Lithium, Li	3% acetic acid	7439-93-2	<0,005	0,6	Pass
Sodium, Na	3% acetic acid	7440-23-5	<0,1	60	Pass
Magnesium, Mg	3% acetic acid	7439-95-4	0,029	60	Pass
Aluminium, Al	3% acetic acid	7429-90-5	<0,05	1	Pass
Potassium, K	3% acetic acid	7440-09-7	<0,1	60	Pass
Calcium, Ca	3% acetic acid	7440-70-2	0,766	60	Pass
Chromium, Cr	3% acetic acid	7440-47-3	<0,005	0,01	Pass
Manganese, Mn	3% acetic acid	7439-96-5	<0,005	0,6	Pass
Iron, Fe	3% acetic acid	7439-89-6	0,036	48	Pass
Cobalt, Co	3% acetic acid	7440-48-4	<0,005	0,05	Pass
Nickel, Ni	3% acetic acid	7440-02-0	<0,005	0,02	Pass
Copper, Cu	3% acetic acid	7440-50-8	0,003	5	Pass
Zinc, Zn	3% acetic acid	7440-66-6	0,003	5	Pass
Arsenic, As	3% acetic acid	7440-38-2	<0,002	0,01	Pass
Cadmium, Cd	3% acetic acid	7440-43-9	<0,002	0,01	Pass
Antimony, Sb	3% acetic acid	7440-36-0	<0,005	0,04	Pass
Barium, Ba	3% acetic acid	7440-39-3	<0,005	1	Pass
Lanthanum, La	3% acetic acid	7439-91-0	<0,005	0,05	Pass
Europium, Eu	3% acetic acid	7440-53-1	<0,005	0,05	Pass
Gadolinium, Gd	3% acetic acid	7440-54-2	<0,005	0,05	Pass
Terbium, Tb	3% acetic acid	7440-27-9	<0,005	0,05	Pass
Mercury, Hg	3% acetic acid	7439-97-6	<0,005	0,01	Pass
Lead, Pb	3% acetic acid	7439-92-1	<0,005	0,01	Pass
Sum of lanthanide – Eu, Gd, La, Tb	3% acetic acid	-	<0,005	0,05	Pass

5. Change log

Date	Version	Reason of change
02-06-2022	-	Original report

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[1] Um[%]: The expanded uncertainty was estimated for the coverage factor $k=2$ with 95% confidence level. Sampling uncertainty has not been taken into consideration. For Further information please contact laboratory responsible. Unless otherwise specified when conformity is stated laboratory applies the simple acceptance decision rule in accordance with ILAC-G8:09/2019.

[2] OM – overall migration, SM – Specific migration, NIAS – non-intentionally added substances, HS – volatile analysis, SP - special conditions.

[3] The evaluation is based on the Commission Regulation (EU) No 10/2011 with amendments up to and including Commission Regulation (EU) 1245/2020 on plastic materials and articles intended to come into contact with food for the above mentioned condition.

[4] Migration result expressed in mg/kg applying the conventional surface to volume ratio of 6 dm^2 per 1 kg of food.

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