

PRODUCT INFORMATION SHEET

Gluten, Hazelnut and Pecan in Spiking Level Sample

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	<i>DLA ptAL06 B (2022) Allergens VI: , Gluten, Hazelnut and Pecan in Chocolate with "Spiking Level Sample" – Sample SP</i>
Identifier / LOT	<i>RM 2022-AL06 B</i>
Expiry date	<i>December 2026</i>
Matrix	<i>Potato Powder</i>
Physical description	<i>Powder</i>
Packaging / weight	<i>Sealed foil pouche / 25 g</i>
Storage conditions	<i>2 - 10°C, long term < -18°C (dry and dark)</i>
Name and address manufacturer	DLA - Proficiency Tests GmbH <i>Hauptstr. 80, 23845 Oering, Germany Tel. ++49-(0)4532-9183358, Fax. ++49(0)4102-9944976 eMail. pt@dla-lvu.de, website. www.dla-lvu.de</i>

Composition of Material

Ingredients	Amounts
Potato Powder Ingredients: Potatoes, E471, E304, E223, E100	99,9 g/100 g
Wheat wheat flour, mixture (21 products from Europe, Asia, USA) – as wheat flour* – thereof 10,1% total protein** – thereof gluten***	253 mg/kg 25,6 mg/kg 22,0 mg/kg
Hazelnut roasted, ground, mixture (10 products from 5 countries / Europe) – as hazelnut* – thereof 14,1% total protein**	23,8 mg/kg 3,36 mg/kg
Pecan ground, mixture (8 products from non-EU countries incl. Mexico and USA) – as pecan* – thereof 9,86% total protein**	31,2 mg/kg 3,08 mg/kg
further Ingredients: Maltodextrin, sodium sulfate and silicon dioxide	<0,2 g/100 g

* Allergen contents as "total food" as described in the column ingredients according to the gravimetric mixture

** Protein contents according to laboratory analysis of the raw material (total nitrogen according to Kjeldahl with F=5,7 for wheat protein, F=5,3 for hazelnut and pecan protein)

*** Protein contents according to literature values (approx. 8,7% gluten in wheat flour [A, B])

Minimum Sample Size

A minimum sample size of 5 g is recommended for sample preparation.

The homogeneity tests were performed with sample sizes of 5 g (Microtracer analysis).

The mixture homogeneity before bottling was examined 8-fold by microtracer analysis. Homogeneity was sufficient with a probability of $\geq 25\%$ (excellent mixture) and a HorRat value in the range of acceptance (0,3 to 1,3) (for more details see final report of PT).

Reference Values

All reference values were derived from the related PT round (for more details see final report).

Reference Values quantitative in mg/kg ELISA

Parameter	Gluten	
	All methods*	Method RS**
Numbers of results	17	9
Number of outliers	1	0
Assigned Value (X_{pt})	32,4	31,9
Robust standard deviation	10,80	7,82
Standard uncertainty	3,28	3,26
Target standard deviation σ_{pt}	8,11	7,98
Target range	16,2 – 48,6	16,0 – 47,9

* Results of diverse ELISA Methods / ** ELISA Method: Ridascreen®, R-Biopharm

Parameter	Hazelnut		
	Methods "Peak 26" *	Method RS-F**	Method VT***
Numbers of results	10	6	5
Number of outliers	0	0	0
Assigned Value (X_{pt})	26,3	26,5	12,5
Robust standard deviation	8,86	10,1	2,64
Standard uncertainty	3,50	5,15	1,47
Target standard deviation σ_{pt}	6,57	6,61	3,14
Target range	13,1 – 39,4	13,2 – 39,7	6,27 – 18,8

* Results of diverse ELISA Methods / ** ELISA Method: Ridascreen Fast®, R-Biopharm / *** ELISA Method: Veratox, Neogen

Parameter	Pecan	
	Method Peak 13*	
Numbers of results	6	
Number of outliers	0	
Assigned Value (X_{pt})	12,6	
Robust standard deviation	3,99	
Standard uncertainty	2,04	
Target standard deviation σ_{pt}	3,16	
Target range	6,31 – 18,9	

* Results of diverse ELISA Methods

Reference Values qualitative ELISA

Parameter	Gluten*	Hazelnut*	Pecan*
Number positive	18	15	10
Number negative	1	0	1
Percent positive	94	100	91
Percent negative	4	0	9
Consensus value	positive	positive	positive

* Results of diverse ELISA Methods (LODs Gluten 0,3 – 5 mg/kg, Hazelnut 0,07 – 2,5 mg/kg, LODs Pecan 0,2 – 2,0 mg/kg)

Reference Values qualitative PCR

Parameter	Hazelnut*	Pecan*
Number positive	3	3
Number negative	0	0
Percent positive	100	100
Percent negative	0	0
Consensus value	positive	positive

* Results of diverse PCR Methods (LODs Hazelnut 0,4 - 10 mg/kg, LODs Pecan 1,0 mg/kg)

Intended Use

- for laboratory use only, no food!
- validation of analytical methods
- control sample for quality control charts
- test material for inter-laboratory comparisons

Storage Instructions and Handling Information

The material should be stored as stated on page 1. Before use of the material should be warmed up to room temperature. The content should be mixed thoroughly prior to subsampling (see minimum sample size above). The material should be weighed immediately after opening of the foil pouche/bottle and closed again afterwards in order to avoid uptake of moisture. Frequent freezing and thawing should be avoided as this can lead to changes in the properties of the material. The expiry date of this RM is based on the current knowledge and applies only for proper storage conditions in the originally closed foil pouche/bottle.

Safety Precautions

The usual laboratory safety precautions should be applied when working with the RM considering the type of ingredients, parameters and its concentration.

Data Source

The material was analysed by 20 laboratories within the related proficiency test (PT). Different analytical methods have been used.

Various

The user must determine the suitability of this RM for its particular purpose. DLA makes no warranty of any kind, expressed or implied, other than its products meet all quality control standards set by DLA. We do not guarantee this product can be used for a special application.

Datum / Date: 12 December 2023

Matthias Besler-Scharf, PhD (EP-Koordinator / PT-Coordinator)
- *gezeichnet / signed M. Besler-Scharf*

