PRODUCT INFORMATION SHEET

Cashew, Hazelnut and Egg in Spiking Level Sample

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	*DLA ptAL05 (2023) Allergens V: Cashew, Hazelnut and Egg in Pastry (Cocoa Biscuit) with "Spiking Level Sample" - Spiking Level Sample*
Identifier / LOT	*RM 2023-AL05 SP*
Expiry date	*December 2027*
Matrix	*Potato Powder*
Physical description	*Powder*
Packaging / weight	*Sealed foil pouche / 15 g*
Storage conditions	*cooled 2 - 10°C, long term frozen < -18°C (dry and dark)*
Name and address manufacturer	***DLA - Proficiency Tests GmbH*** *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*

Composition of Material

Ingredients	Amounts
Potato Powder Ingredients: Potatoes, E471, E304, E223, E100	99,9 g/100 g
Cashew **Cashew, roasted, milled,** mixture (9 products from Asia and unknown origin) – as cashew* – thereof 18,5% total protein**	 25,1 mg/kg 4,63 mg/kg
Hazelnut **Hazelnut, roasted, ground**, mixture (10 products from 5 countries, Europe) – as hazelnut* – *thereof 14,1% total protein***	 27,4 mg/kg 3,87 mg/kg
Egg **Whole egg powder, pasteurized, spray dried**, mixture (6 products from 2 countries, Europe) – as whole egg powder* – thereof 46,9% total protein** – thereof 26,0% egg white protein***	 26,6 mg/kg 12,4 mg/kg 6,92 mg/kg
further Ingredients: *Maltodextrin 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=5,30 for cashew protein and hazelnut protein and with F=6,25 for whole egg protein)
*** Egg white protein according to literature [see report]

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 10-fold by microtracer analysis. Homogeneity was sufficient with a probability of ≥ 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	Cashew	
	All methods*	Method RS-F**
Number of results °	16	7
Number of outliers	2	0
Assigned Value (Xpt)	***27,3***	***29,9***
Robust standard deviation	6,85	7,48
Standard uncertainty	2,14	4,3
Target standard deviation σpt	6,83	7,48
Target range	***13,7 – 41,0***	***15,0 – 44,9***

* Results of diverse ELISA Methods
** ELISA Method: RS-F = Ridascreen® Fast, R-Biopharm
° without outlier results

Parameter	Hazelnut	
	All methods*	Method RS-F**
Number of results	23	11
Number of outliers	-	-
Assigned Value (Xpt)	***21,0***	***22,6***
Robust standard deviation	7,66	8,28
Standard uncertainty	2,00	3,12
Target standard deviation σpt	5,26	5,66
Target range	***10,5 – 31,6***	***11,3 – 34,0***

* Results of diverse ELISA Methods
** ELISA Method: RS-F = Ridascreen® Fast, R-Biopharm

Parameter	Egg (as Whole Egg Powder)		
	All methods*	Method MI-II**	Method RS-F***
Number of results	24	6	10
Number of outliers	-	-	-
Assigned Value (Xpt)	***28,6***	***27,5***	***24,9***
Robust standard deviation	10,3	8,90	4,58
Standard uncertainty	2,62	4,54	1,81
Target standard deviation σpt	7,15	6,87	6,22
Target range	***14,3 – 42,9***	***13,7– 41,2***	***12,4 – 37,3***

* Results of diverse ELISA Methods
** ELISA Method: MI-II = Morinaga Institute ELISA Kit II
*** ELISA Method: RS-F = Ridascreen® Fast, R-Biopharm

Reference Values qualitative PCR

Parameter	Cashew *	Hazelnut *
Number positive	12	12
Number negative	0	0
Percent positive	100	100
Percent negative	0	0
Consensus value	***positive***	***positive***

* Results of diverse PCR Methods (LODs positive results 0,4-1 mg/kg Cashew and 0,28-10 mg/kg Hazelnut)

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

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 analyzed by 32 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: 5 November 2024

Dr. Matthias Besler-Scharf (EP-Koordinator / PT-Coordinator)
- gezeichnet / signed M. Besler-Scharf

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