

PRODUCT INFORMATION SHEET

Almond, Egg and Hazelnut in Spiking Level Sample (SP)

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	<i>DLA ptAL07 (2025) – Allergens VII: Almond, Egg, Hazelnut in Ice Cream (Vanilla) [Samples A + B] and "Spiking Level Sample" [SP] – Sample SP (Spiking Level Sample)</i>
Identifier / LOT	<i>RM 2025-AL07 SP</i>
Expiry date	<i>February 2027</i>
Matrix	<i>Potato Powder</i>
Physical description	<i>Powder</i>
Packaging / weight	<i>Sealed foil pouche / 15 g</i>
Storage conditions	<i>2-10°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	Sample A	Sample B	Sample SP present sample
Ice Cream Vanilla Ingredients: Skimmed milk, whey product, coconut fat, glucose syrup, glucose-fructose syrup, sugar, emulsifier: mono- and diglycerides of fatty acids, coloring food: carrot concentrate, stabilizer: locust bean gum and guar gum, bourbon vanilla extract, extracted ground vanilla beans, potassium sorbate and positive sample: allergenic ingredients as below Nutrients per 100 g: Fat 10 g, Carbohydrates 25 g, Protein 1,5 g	99,9 g/100 g	100 g/100 g	-
Potato Powder Ingredients: Potatoes, E471, E304, E223, E100	-	-	99,9 g/100 g
Almond Almond, roasted, milled mixture (23 products from USA, Europe, Australia, Western Asia) – as almond* – thereof 21,1% total protein**	25,0 mg/kg 5,28 mg/kg	-	26,7 mg/kg 5,64 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***	20,3 mg/kg 9,52 mg/kg 5,28 mg/kg	-	21,2 mg/kg 9,92 mg/kg 5,50 mg/kg
Hazelnut Hazelnut, roasted, ground , mixture (10 products from 5 countries, Europe) – as hazelnut* – thereof 14,1% total protein**	20,0 mg/kg 2,81 mg/kg	-	20,2 mg/kg 2,84 mg/kg
further Ingredients: Maltodextrin, sodium sulfate and silicon dioxide	<0,3 g/100 g	-	<0,3 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=5,18 for almond protein, F=6,25 for whole egg protein, and F=5,30 for hazelnut protein)

*** Contents according to literature values: 26,0% egg white protein

Note: The metrological traceability of temperature, mass and volume during production of the PT samples is ensured by DAkkS-compliant calibrated reference materials.

Minimum Sample Size / Homogeneity

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 after bottling was examined 10-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).

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	Almond	
	All Results*	Method RS-F**
Number of results	23°	9
Number of outliers	1	-
Assigned Value (X_{pt})	19,5	19,9
Robust standard deviation	5,15	8,20
Standard uncertainty	1,34	3,42
Target standard deviation opt	4,88	4,98
Target range	9,76 – 29,3	10,0 – 29,9

* ELISA Method: diverse Methods

** ELISA Method RS-F = Ridascreen® Fast, R-Biopharm

° without outlier

Parameter	Egg (as whole egg powder)		
	"Peak 23" *	Method RS**	Method RS-F***
Number of results	22°	7	9°
Number of outliers	2	-	1
Assigned Value (X_{pt})	22,5	36,9	24,4
Robust standard deviation	7,59	10,7	5,57
Standard uncertainty	2,02	5,05	2,32
Target standard deviation opt	5,64	9,22	6,09
Target range	11,3 – 33,8	18,4 – 55,3	12,2 – 36,5

* "Peak 23" methods: all applied methods except RS = Ridascreen®, R-Biopharm

** ELISA Method RS = Ridascreen®, R-Biopharm

*** ELISA Method RS-F = Ridascreen® Fast, R-Biopharm

° without outlier

Parameter	Hazelnut	
	All Results*	Method RS-F**
Number of results	18°	9
Number of outliers	2	-
Assigned Value (X_{pt})	17,3	19,8
Robust standard deviation	4,61	5,20
Standard uncertainty	1,36	2,17
Target standard deviation opt	4,33	4,94
Target range	8,66 – 26,0	9,88 – 29,6

* ELISA Method: diverse Methods

** ELISA Method RS-F = Ridascreen® Fast, R-Biopharm

° without outlier

Reference Values qualitative ELISA

Parameter	Almond*	Egg (whole egg powder)*	Hazelnut*
Number positive	25	34	22
Number negative	0	0	0
Percent positive	100	100	100
Percent negative	0	0	0
Consensus value	positive	positive	positive

* Results of diverse ELISA Methods (LODs positive results Almond 0,06-11,8 mg/kg, Egg 0,08-4 mg/kg, Hazelnut 0,04-2,85 mg/kg)

Reference Values qualitative PCR

Parameter	Almond*	Hazelnut*
Number positive	13	16
Number negative	2	0
Percent positive	87	100
Percent negative	13	0
Consensus value	positive	positive

* Results of diverse PCR Methods (LODs positive results Almond 0,4-50 mg/kg, Hazelnut 0,1-10 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
- no medical use

Storage Instructions and Handling Information

The material should be stored as stated on page 1. Before use, 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 poche/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 poche/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 33 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.



created	approved (PT-Coordinator)	updated
Alexandra Scharf, PhD	Matthias Besler-Scharf, PhD	-
<i>signed A. Scharf</i>	<i>signed M. Besler-Scharf</i>	-
13 April 2026	13 April 2026	-