

PRODUCT INFORMATION SHEET

Cereals containing Gluten, Peanut, Lupine, Buckwheat, Celery and Sesame

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	DLA ptALS3 (2024) Allergen Screening III: Cereals containing Gluten, Peanut, Lupine, Buckwheat, Celery and Sesame - Samples 1-4
Identifier / LOT	RM 2024-ALS3 Set
Expiry date	January 2029
Matrix	Allergens in simple matrix (see tables)
Physical description	Powder
Packaging / weight	Sealed foile poche / 20 g
Storage conditions	2-10°C, long term 2-10°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)	74 - 76 %
Maltodextrin	24 - 26 %
Allergen-Premixes <u>Ingredients:</u> Maltodextrin, Sodium sulfate, Silicon dioxide and Allergens (0,8% - 11% each)	0,05 - 0,5 %

Added allergenic ingredients positive amounts in parenthesis in mg/kg** given as food item (for cereals as total protein*)

Ingredients *	Sample 1	Sample 2	Sample 3	Sample 4
Oat: Oat flakes (Protein 12%)	negative	positive (42)	negative	negative
Rye: Rye grain milled (Protein 8,0%)	negative	negative	positive (40)	negative
Wheat: Wheat flour mixture (Protein 11%)	positive (49)	negative	negative	negative
Peanut: commercial peanut butter (Protein 30%)	positive (42)	positive (26)	negative	negative
Lupine: Sweet lupine flour (Protein 37%)	negative	negative	positive (78)	positive (41)
Buckwheat: Seeds, milled (Protein 12%)	negative	negative	positive (40)	positive (25)
Celery: Leafs, dried (Protein 14%)	positive (66)	negative	negative	negative
Celery: Roots, dried (Protein 8,2%)	negative	negative	positive (86)	negative
Celery: Seeds, dried (Protein 20%)	negative	negative	negative	positive (61)
Sesame: Seeds white, dried (Protein 22%)	negative	positive (42)	negative	negative

* Protein contents according to laboratory analysis (total nitrogen, Kjeldahl general factor F=6,25)

**Allergen contents of „food item“ as indicated in the column of ingredients according gravimetric mixing

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

The detectability or absence of the allergens was tested by DLA using lateral flow assays. The results are in agreement with the spiking of the PT samples 1-4.

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 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) (for more details see final report of PT).

Reference Values

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

Reference Values qualitative (Consensus Values*)

Methods	Sample 1	Sample 2	Sample 3	Sample 4
Gluten ELISA / LFD	positive	negative **	positive	negative
Gluten-containing Cereals PCR	positive	positive	positive	negative
Oat PCR	negative	positive	negative	negative
Rye PCR	none ***	negative	positive	negative
Wheat PCR	positive	negative	negative	negative
Peanut ELISA / LFD	positive	positive	negative	negative
Peanut PCR	positive	positive	negative	negative
Lupine ELISA / LFD	negative	negative	positive	positive
Lupine PCR	negative	negative	positive	positive
Buckwheat PCR	negative	negative	positive	positive
Celery PCR	positive	negative	positive	positive
Sesame ELISA / LFD	positive	positive	negative	negative
Sesame PCR	positive	positive	negative	negative

* Consensus values $\geq 75\%$ positive or negative results of PT-participants

** For the oat containing sample 2 (42 mg/kg oat protein) a negative consensus value was obtained. (Non-contaminated oat do not contain gluten. This is in agreement with the consensus value of participants results. However, since oat is on the list of allergens to be labelled as "gluten-containing" cereals according to the EU Information Regulation (EU Regulation 1169/2011 Annex II), the qualitative evaluation of sample 2 was set with respect to the spiking to "positive". Analytically, the parameter gluten in the pure oat is "negative". Traces of other cereals in the oat sample can not be excluded.)

***For sample 1 spiked with wheat, no consensus value of $\geq 75\%$ positive or negative results was obtained. Traces of rye can not be excluded.

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 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 19 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.



approved (PT-Coordinator)	updated
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20 March 2025	3 February 2026