

PRODUCT INFORMATION SHEET

Almond, Brazil Nut, Coconut and Pecan in Mousse au Chocolat

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	DLA ptAL08 (2024) – Allergens VIII: Almond, Brazil Nut, Coconut and Pecan in Mousse au Chocolat with "Spiking Level Sample" (3 different Samples) – Sample B (positive sample)
Identifier / LOT	RM 2024-AL08 B
Expiry date	March 2029
Matrix	Mousse au Chocolat
Physical description	Solid paste-like
Packaging / weight	Glass bottles / 25 g
Storage conditions	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	Sample A	Sample B present sample	Sample SP
Mouse au Chocolat Ingredients: Dark chocolate, eggs, cream, sugar, water, preservative potassium sorbate and positive sample: allergenic ingredients as below	100 g/100 g	99,7 g/100 g	-
Potato Powder Ingredients: Potatoes, E471, E304, E223, E100	-	-	99,7 g/100 g
Almond, roasted, milled mixture (23 products from USA, Europe, Australia, Western Asia) – as almond* – <i>thereof 21,1% total protein**</i>	-	34,0 mg/kg 7,18 mg/kg	31,8 mg/kg 6,72 mg/kg
Brazil nut, milled – as brazil nut* – <i>thereof 12,9% total protein**</i>	-	30,9 mg/kg 3,98 mg/kg	31,0 mg/kg 4,00 mg/kg
Coconut, flours mixture (6 products from Asia and unknown origin) – as coconut* – <i>thereof 15,9% total protein**</i>	-	35,9 mg/kg 5,71 mg/kg	35,5 mg/kg 5,65 mg/kg
Pecan, raw, milled mixture (8 products from USA, Mexico and unknown) – as pecan* – <i>thereof 9,86% total protein**</i>	-	30,1 mg/kg 2,96 mg/kg	32,4 mg/kg 3,19 mg/kg
<i>further Ingredients: Maltodextrin, sodium sulfate and silicon dioxide</i>	-	<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= 5,46 for brazil nut protein, F=5,30 for coconut protein and pecan 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 of the parameter almond were carried out by ELISA analyzing two subsets from 10 test items (according to ISO 13528:2015 Annex B). Homogeneity was sufficient with a standard deviation between the samples S_s of $\leq 15\%$ („heterogeneity standard deviation“) using Morinaga Food Allergen ELISA Kit MloBS (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	Almond		
	All Results (Info)*	Method RS-F**	Methods "Peak 14" ***
Number of results	18°	6°	10°
Number of outliers	1	1	2
Assigned Value (X_{pt})	17,2	24,2	13,6
Robust standard deviation	6,97	3,83	1,96
Standard uncertainty	2,05	1,95	0,77
Target standard deviation σ_{pt}	4,29	6,04	3,39
Target range	8,58 – 25,8	12,1 – 36,3	6,78 – 20,3

* ELISA Method: divers Methods

** RS-F= Ridascreen® Fast, R-Biopharm

*** "Peak 14" methods: AQ = AgraQuant, RomerLabs, GSD = Gold Standard Diagnostics, Kassel, SP = SensiSpec ELISA, Gold Standard Diagnostics and VT = Veratox, Neogen

° without outlier

(Info): for information only

Parameter	Brazil Nut	Coconut	Pecan Nut	
	All Results*	All Results (Info)*	All Results (Info)*	Methods "Peak 25" **
Number of results	8°	9°	10°	7
Number of outliers	2	1	-	-
Assigned Value (X_{pt})	20,2	75,7	33,9	24,7
Robust standard deviation	4,46	32,1	18,4	9,78
Standard uncertainty	1,97	13,4	7,27	4,62
Target standard deviation σ_{pt}	5,05	18,9	8,47	6,17
Target range	10,1 – 30,3	37,9 – 114	16,9 – 50,8	12,3 – 37,0

* ELISA Method: divers Methods (brazil nut: without BF = MonoTrace ELISA, BioFront Technologies; and VT = Veratox, Neogen not in target range)

** "Peak 25" methods: 3M = 3M Protein ELISA Kit, DE = Demeditec ELISA, GSD = Gold Standard Diagnostics, Kassel and SP = SensiSpec ELISA, Gold Standard Diagnostics

° without outlier

(Info): for information only

Reference Values qualitative ELISA

Parameter	Almond*	Brazil Nut*	Coconut*	Pecan*
Number positive	19	12	10	12
Number negative	0	0	0	0
Percent positive	100	100	100	100
Percent negative	0	0	0	0
Consensus value	positive	positive	positive	positive

* Results of diverse ELISA Methods (LODs positive results Almond 0,06-2,5 mg/kg, Brazil Nut 0,13-4,0 mg/kg, Coconut 0,13-2,0 mg/kg, Pecan 0,17-2,0 mg/kg)

Reference Values qualitative PCR

Parameter	Almond*	Brazil Nut*	Coconut*	Pecan*
Number positive	4	5	2	6
Number negative	2	1	0	1
Percent positive	67	83	100	86
Percent negative	33	17	0	14
Consensus value	none**	positive	positive	positive

* Results of diverse PCR Methods (LODs positive results Almond 0,4 mg/kg, Brazil Nut 0,4-10 mg/kg, Coconut 1,0 mg/kg, Pecan 0,4-1,0 mg/kg)

** no consensus value of at least 75 % concordant positive results was obtained

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 22 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
Ulrike Vorreiter	Matthias Besler-Scharf, PhD	Ulrike Vorreiter
<i>signed U. Vorreiter</i>	<i>signed M. Besler-Scharf</i>	<i>signed U. Vorreiter</i>
30 April 2025	30 April 2025	2 April 2026