

## PRODUCT INFORMATION SHEET

### ***Pistachio, Fish and Celery in Instant Soup Powder***

*PT originated REFERENCE MATERIAL (RM)*

#### Description of the RM

|                               |                                                                                                                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name / Material of related PT | <i>DLA ptAL07 (2023) Allergens VII: Pistachio, Fish and Celery in Instant Soup Powder - Sample A</i>                                                                                                                                                       |
| Identifier / LOT              | <i>RM 2023-AL07 A</i>                                                                                                                                                                                                                                      |
| Expiry date                   | <i>February 2028</i>                                                                                                                                                                                                                                       |
| Matrix                        | <i>Instant Soup Powder</i>                                                                                                                                                                                                                                 |
| Physical description          | <i>Powder</i>                                                                                                                                                                                                                                              |
| Packaging / weight            | <i>Sealed foil pouche / 25 g</i>                                                                                                                                                                                                                           |
| Storage conditions            | <i>room temperature, long term cooled 2 - 10°C (dry and dark)</i>                                                                                                                                                                                          |
| Name and address manufacturer | <b>DLA - Proficiency Tests GmbH</b><br>Hauptstr. 80, 23845 Oering, Germany<br>Tel. ++49-(0)4532-9183358, Fax. ++49(0)4102-9944976<br>eMail. <a href="mailto:pt@dla-lvu.de">pt@dla-lvu.de</a> , website. <a href="http://www.dla-lvu.de">www.dla-lvu.de</a> |

#### Composition of Material

| Ingredients                                                                                                                                                                                                                                                                                                                                                                                                                                             | Amounts                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Mushroom Cream Soup Powder<br>Ingredients: modified starch, palm oil, glucose syrup, starch, iodised salt, potatoes, sugar, rice flour, maltodextrin, onions, yeast extract, mushroom juice concentrate, salt, spices (pepper, nutmeg, turmeric), garlic, mushroom powder, tomato powder, flavors, acidulants (citric acid) and positive sample: allergenic ingredients as below<br>Nutrients per 100 g:<br>Fat 21 g, Carbohydrates 58 g, Protein <5,5g | 81,3 g/100 g                          |
| Potato Flour                                                                                                                                                                                                                                                                                                                                                                                                                                            | 18,6 g/100 g                          |
| Pistachio<br>Pistachio, roasted, milled mixture (10 products from USA, Iran, Turkey, Greece, Italy, Spain)<br>– as pistachio*<br>– thereof 21,1% total protein**                                                                                                                                                                                                                                                                                        | 25,0 mg/kg<br>5,28 mg/kg              |
| Fish<br>Codfish ( <i>Gadus morhua</i> ), frozen, freeze-dried, mixture (2 products, Northeast Atlantic)<br>– as fish powder*<br>– thereof 78,4% total protein**<br>– calculated as fresh fish***                                                                                                                                                                                                                                                        | 38,7 mg/kg<br>30,3 mg/kg<br>194 mg/kg |
| Celery Leaves + Stem<br>Celery leaves dried, celery stem dried, milled mixture (8 products from Germany, Poland)<br>– as celery leaves + stem*<br>– thereof 16,2% total protein**                                                                                                                                                                                                                                                                       | 29,3 mg/kg<br>4,74 mg/kg              |
| further Ingredients:<br>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=6,25 for celery protein, F=5,30 for pistachio protein, and F=5,60 for fish protein))

\*\*\* calculation of fresh codfish with a water content of 80% (Nutrient tables, Souci/Fachmann/Kraut)

### 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) and 1 - 5 g (ELISA methods), respectively.

The mixture homogeneity before 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).

The homogeneity tests of the parameters 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“) (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                               | Pistachio          |                    |                    |
|-----------------------------------------|--------------------|--------------------|--------------------|
|                                         | Methods Peak 10*   | Methods Peak 19**  | Method BF          |
| Number of results                       | 11                 | 10                 | 5                  |
| Number of outliers                      | -                  | -                  | -                  |
| <b>Assigned Value (X<sub>pt</sub>)</b>  | <b>10,4</b>        | <b>19,0</b>        | <b>9,34</b>        |
| Robust standard deviation               | 3,34               | 5,48               | 1,65               |
| Standard uncertainty                    | 1,26               | 2,17               | 0,924              |
| Target standard deviation $\sigma_{pt}$ | 2,61               | 4,76               | 2,34               |
| <b>Target range</b>                     | <b>5,21 – 15,6</b> | <b>9,51 – 28,5</b> | <b>4,67 – 14,0</b> |

\* ELISA Methods Peak 10: 3M = 3M Protein ELISA Kit / AQ = AgraQuant, RomerLabs / BC = BioCheck ELISA / BF = MonoTrace ELISA, BioFront Technologies

\*\* ELISA Methods Peak 19: AQ = AgraQuant, RomerLabs / EZ = EZ-Plate ELISA, OrSell S.p.a. / GSD = Gold Standard Diagnostics, Kassel / NL-E = nutriLinia®E Allergen-ELISA / SP = SensiSpec ELISA Kit, Gold Standard Diagnostics

| Parameter                               | Fish (as Fresh Fish) |                    |
|-----------------------------------------|----------------------|--------------------|
|                                         | All methods*         | Method AQ**        |
| Number of results                       | 10                   | 5                  |
| Number of outliers                      | -                    | -                  |
| <b>Assigned Value (X<sub>pt</sub>)</b>  | <b>35,8</b>          | <b>35,4</b>        |
| Robust standard deviation               | 11,3                 | 4,05               |
| Standard uncertainty                    | 4,45                 | 2,26               |
| Target standard deviation $\sigma_{pt}$ | 8,94                 | 8,84               |
| <b>Target range</b>                     | <b>17,9 – 53,6</b>   | <b>17,7 – 53,0</b> |

\* Results of diverse ELISA Methods / \*\* ELISA Method: AgraQuant, RomerLabs

### Reference Values qualitative ELISA

| Parameter              | Pistachio *     | Fish *          |
|------------------------|-----------------|-----------------|
| Number positive        | 19              | 10              |
| Number negative        | 0               | 0               |
| Percent positive       | 100             | 100             |
| Percent negative       | 0               | 0               |
| <b>Consensus value</b> | <b>positive</b> | <b>positive</b> |

\* Results of diverse ELISA Methods (LODs 0,07-1,0 mg/kg pistachio and 1-4 mg/kg fish, fresh)

## Reference Values qualitative PCR

| Parameter              | Pistachio *     | Fish *          | Celery *        |
|------------------------|-----------------|-----------------|-----------------|
| Number positive        | 8               | 14              | 17              |
| Number negative        | 1               | 0               | 0               |
| Percent positive       | 89              | 100             | 100             |
| Percent negative       | 11              | 0               | 0               |
| <b>Consensus value</b> | <b>positive</b> | <b>positive</b> | <b>positive</b> |

\* Results of diverse PCR Methods (LODs  $\leq 0,4$ -8 mg/kg pistachio, 0,4-10 mg/kg fish, fresh and  $\leq 0,4$ -80 mg/kg as celery seeds)

## 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 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 28 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                    |
|--------------------------------|----------------------------|
| Matthias Besler-Scharf, PhD    | Ulrike Vorreiter           |
| <i>signed M. Besler-Scharf</i> | <i>signed U. Vorreiter</i> |
| 15 February 2024               | 2 March 2026               |