PRODUCT INFORMATION SHEET

Response PT Celery: 5 processed Samples Celery Seeds (ground), Celery Leaves (ground), Celery Root (ground), Celery Seed Vegetarian Spread (heated) and Celery in Spice Crackers (baked)

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	*DLA ptALR2 (2022) Response PT Celery: 5 processed Samples Celery Seeds (ground), Celery Leaves (ground), Celery Root (ground), Celery Seed Vegetarian Spread (heated) and Celery in Spice Crackers (baked) in Potato Powder Matrix (and a "blank sample")*
Identifier / LOT	*RM 2022-ALR2 Set*
Expiry date	*September 2028*
Matrix	*Potato Powder*
Physical description	*Powder*
Packaging / weight	*Sealed foil pouche / 20 g*
Storage conditions	*room temperature, long term cooled 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

PT-Sample series	Sample 1 Celery Seed	Sample 2 Vegetarian Spread	Sample 3 Spice Cracker	Sample 4 Celery Leaves + Stem	Sample 5 Celery Root	Sample 6 „blank“
Ingredients	**g/100 g**	**g/100g**	**g/100g**	**g/100g**	**g/100g**	**g/100g**
Potato powder Ingredients: potato, E471, E304, E223, E100 Nutrients per 100 g: Protein 8,3 g, carbohydrates 76 g, fat 0,6 g, salt 0,15 g	75	75	75	62	75	75
Maltodextrin	25	25	25	21	25	25
Allergen-Premixes Ingredients (sample 1, 4 and 5): maltodextrin (94% - 98%), silicon dioxide (<3%), allergen products as below (each 0,026% - 5% celery)	0,10	0,25	10	0,10	0,15	-
Allergen-Contents	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
*Celery Seeds (ground)** Protein 19,4 % ** *(8 products)*	51	-	-	-	-	-
Vegetarian Spread *(cooked 100°C/15 min, freeze-dried)** Ingredients: tomatos, sunflower oil, chick peas, sugar, modified corn starch, salt,onions, garlic and 2,0% celery seeds *(8 products)* Protein 0,78 % **	-	2490	-	-	-	-
*Spice Crackers** *(baked 200°C, 25 min)* Ingredients: Water, wheat flour, vegetable oil, spice mix, sugar, salt, baking powder and 0,026% celery seeds Protein 0,0052 % **	-	-	100000	-	-	-
*Celery Leaves + Stem (ground)** Protein 16,2 % ** *(8 products)*	-	-	-	50,5	-	-
*Celery Roots (ground)** Protein 9,51 % ** *(6 products)*	-	-	-	-	74,5	-
– *as Celery food item*	51,0	49,7	26,2	50,5	74,5	-
Extended combined uncertainty (k=2) of mustard-content (= ± 12,6 %)	± 6,43	± 6,26	± 3,30	± 6,36	± 9,39	-

*Allergen contents as „total food“ as described in column ingredients according to gravimetric mixture
** Protein contents according to laboratory analysis of raw materials (total nitrogen according to Kjeldahl with F=6,25 for celery protein)

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 8-fold by microtracer analysis. Homogeneity was sufficient with probabilities of ≥ 25% (excellent mixtures) and HorRat values in or slightly above 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 qualitative PCR

	Sample 1 Celery Seed	Sample 2 Vegetarian Spread	Sample 3 Spice Cracker	Sample 4 Leaves + Stem	Sample 5 Celery Root	Sample 6 „blank“
Number positive	16	16	15	16	16	1
Number negative	0	0	1	0	0	15
Percent positive	100	100	94	100	100	6
Percent negative	0	0	6	0	0	94
Consensus value	positive	positive	positive	positive	positive	negative
Spiking	positive	positive	positive	positive	positive	negative

Methods:

ASU = ASU §64 Methode/method

SFA = Sure Food ALLERGEN, R-Biopharm / Congen

SFA-4p = Sure Food Allergen 4plex, R-Biopharm / Congen

div = not indicated / other method

Note: For all celery containing samples 1-5, consensus values of 100% or 94% positive results were obtained by PCR methods.

Reference Values quantitative PCR

Using PCR methods, four participants provided five sets of quantitative results in mg/kg units.
The lowest response (recovery rates) was obtained for celery seeds in the processed spice crackers (sample 3).
For more details see final report and dot-plot presentation of samples 1-5 on the following pages.

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.

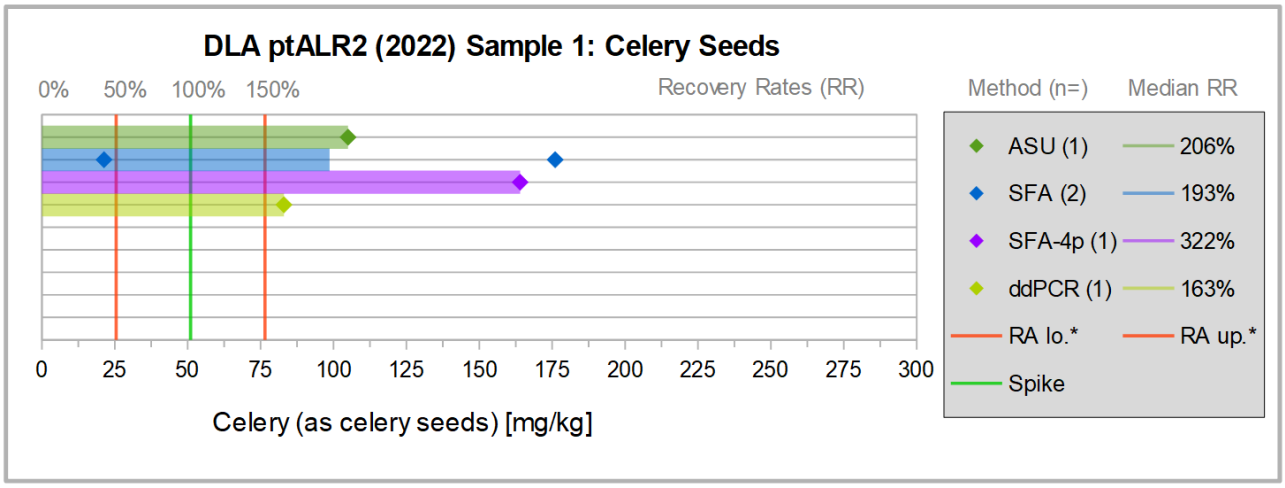
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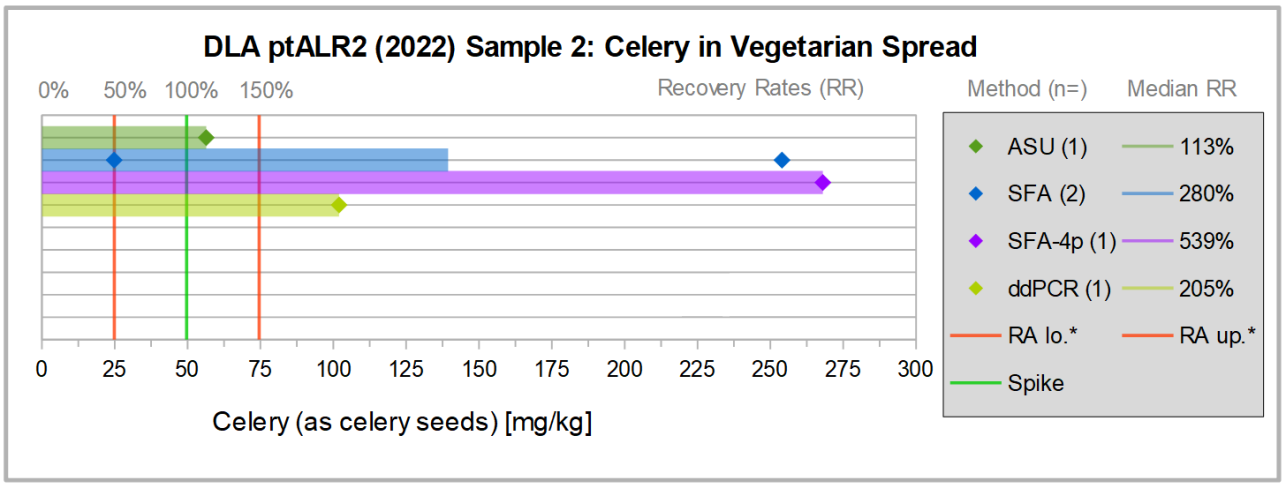
The material was analyzed by 12 laboratories within the related proficiency test (PT). Different analytical methods have been used.

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.

Median of recovery rates (for information only)





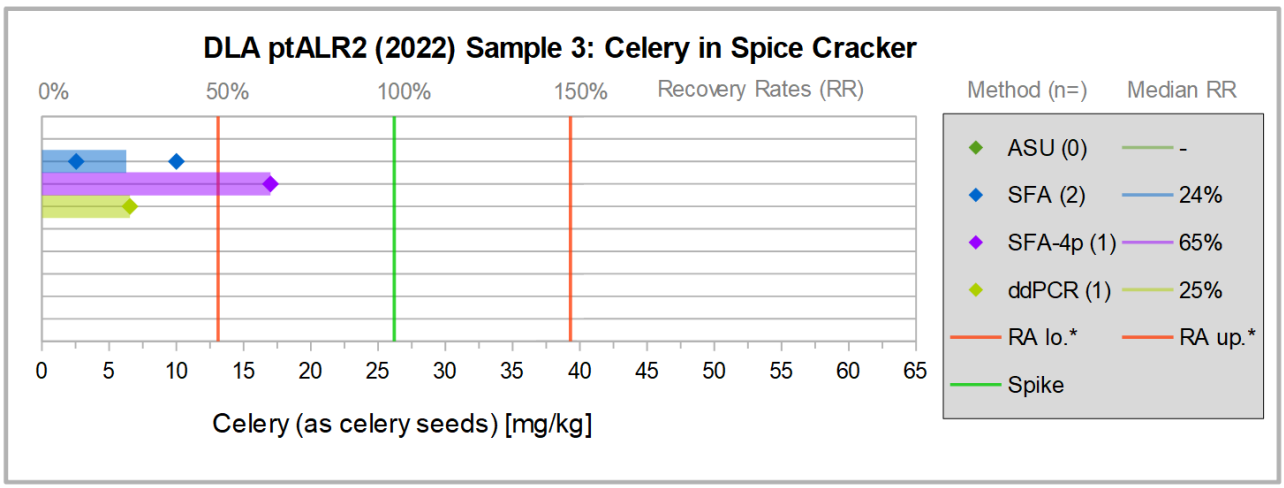


Fig. 1: Celery Allergen Recovery Rates (PCR methods) - Dot plot of single results (Samples 1-3 separated according to methods with indication of the median recovery rate), lower scale content in mg/kg, upper scale recovery rate in % with * acceptance range of 50% - 150% (* range of acceptance: RA lower limit to RA upper limit)



Fig. 2: Celery Allergen Recovery Rates (PCR methods) - Dot plot of single results (Samples 4-5 separated according to methods with indication of the median recovery rate), lower scale content in mg/kg, upper scale recovery rate in % with * acceptance range of 50% - 150% (* range of acceptance: RA lower limit to RA upper limit)

approved (PT-Coordinator)	updated
Matthias Besler-Scharf, PhD	Ulrike Vorreiter
signed M. Besler-Scharf	*signed U. Vorreiter*
31 March 2023	6 October 2026