PRODUCT INFORMATION SHEET

Response PT Gluten: 5 Processed Samples Wheat Flour, Bread, Noodles (Durum Wheat), Bulgur (pre-cooked Wheat) and Seitan (Gluten Protein)

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	*DLA ptALR2 (2021) Response PT Gluten: 5 Processed Wheat Flour, Bread, Noodles (Durum Wheat), Bulgur (pre-cooked Wheat) and Seitan (Gluten Protein)*
Identifier / LOT	*RM 2021-ALR2 Set (1-6)*
Expiry date	*November 2027*
Matrix	*Potato Powder / Maltodextrin*
Physical description	*Powder*
Packaging / weight	*Sealed foil pouche / 6 x 20 g*
Storage conditions	*2 - 10°C, long term < -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

Sample series	**Sample 1** **Noodles**	**Sample 2** **Bread**	**Sample 3** **Bulgur**	**Sample 4** **Wheat Flour**	**Sample 5** **Seitan**	**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	75	75	75
Maltodextrin	25	25	25	25	25	25
Allergen-Premixes Ingredients: processed allergen products (each 6% - 10% gluten) and maltodextrin (seitan only)	0,042	0,046	0,040	0,041	0,045	-
Allergen-Contents	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Noodles (Durum wheat)* Ingredients: Durum wheat semolina, water Protein 12,4% ** *(5 Dry products from Europe)*	418	-	-	-	-	-
White Bread (Soft wheat)* Ingredients: wheat flour, water, yeast, salt, rape-seed oil, acidity regulator E262, invert sugar syr-up, wheat malt flour, antioxidant E300 Protein 11,1% ** *(5 Products from Germany)*	-	456	-	-	-	-
Bulgur (Durum wheat)* Ingredients: Bulgur (Durum wheat, pre-cooked) Protein 11,8% ** *(5 Dry products from Europe)*	-	-	402	-	-	-
Wheat flour (Soft wheat)* Protein 10,1 % ** *(21 Products from Europe, Asia, USA)*	-	-	-	414	-	-
Seitan (Wheat protein)* *(boiled 100°C, 30 min, freeze-dried)* Ingredients: Seitan powder (#), water, salt Protein 69,9% ** *(# 5 Products from Europe)*	-	-	-	-	44,8	-
– *thereof Gluten*	33,0	43,5	30,1	36,0	29,8	-
Extended combined uncertainty (k=2) of gluten content (= ± 12 %)	± 3,96	± 5,22	± 3,61	± 4,32	± 3,58	-

*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=5,7 for wheat protein)
*** Gluten contents calculated according to literature values (for soft wheat approx. 8,7% gluten in soft wheat flours (by DLA related to 10,1% total protein) [39]; for durum wheat approx. 7,7% gluten and 12,1% total protein in durum wheat flours)); for seitan approx. 79,9% gluten and 83,5% total protein in vital gluten products)

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 a probability of ≥ 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 PT round (for more details see final report).

Reference Values qualitative ELISA

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Number positive	12	12	12	12	12	0
Number negative	0	0	0	0	0	12
Percent positive	100	100	100	100	100	0
Percent negative	0	0	0	0	0	100
Consensus value	positive	positive	positive	positive	positive	negative
Spiking	positive	positive	positive	positive	positive	negative

Methods:

PB = Allergen-Shield ELISA, ProGnosis Biotech

RS = Ridascreen®, R-Biopharm

RS-F= Ridascreen® Fast, R-Biopharm

SP-R5 = SensiSpec INgezim Gluten R5, Eurofins

Reference Values qualitative PCR

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Number positive	3	3	3	3	3	0
Number negative	0	0	0	0	0	3
Percent positive	100	100	100	100	100	0
Percent negative	0	0	0	0	0	100
Consensus value	positive	positive	positive	positive	positive	negative
Spiking	positive	positive	positive	positive	positive	negative

Methods:

SFA = Sure Food ALLERGEN, R-Biopharm / Congen

SFA-Q = Sure Food Allergen Quant, R-Biopharm / Congen

div = keine genaue Angabe / andere Methode

div = not indicated / other method

Median of Recovery Rates: Samples 1-2

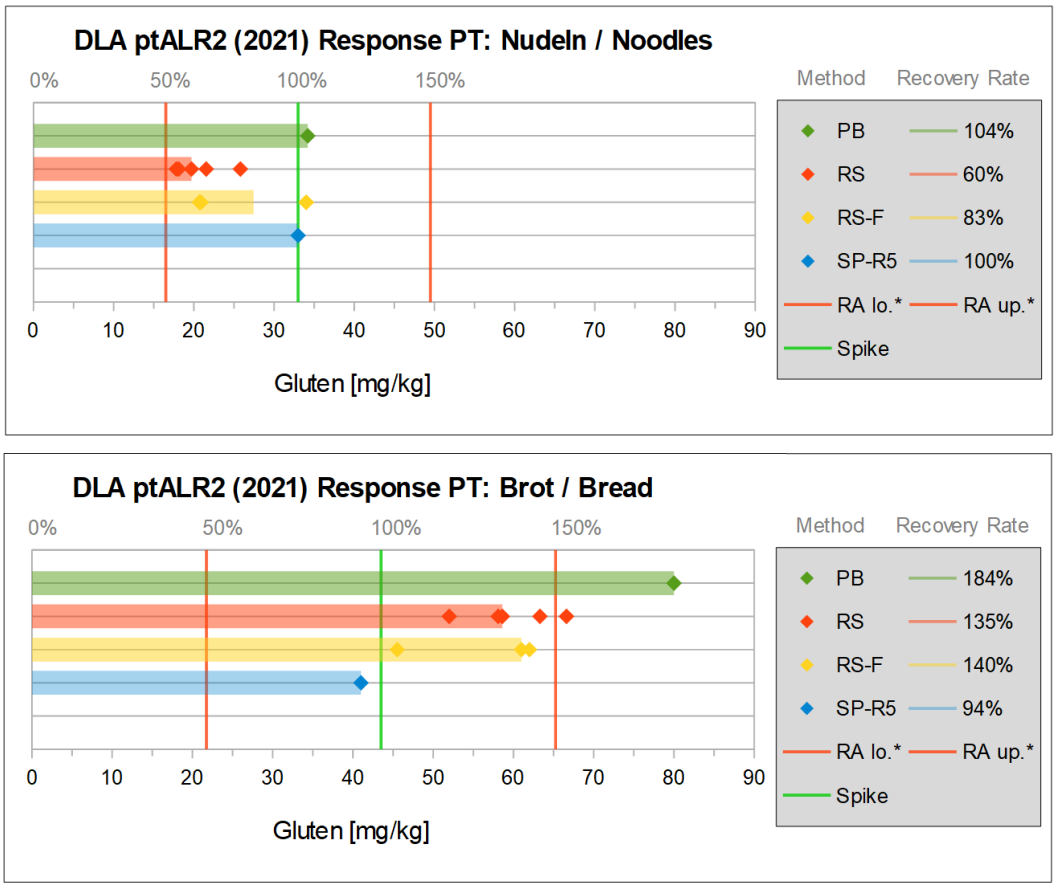
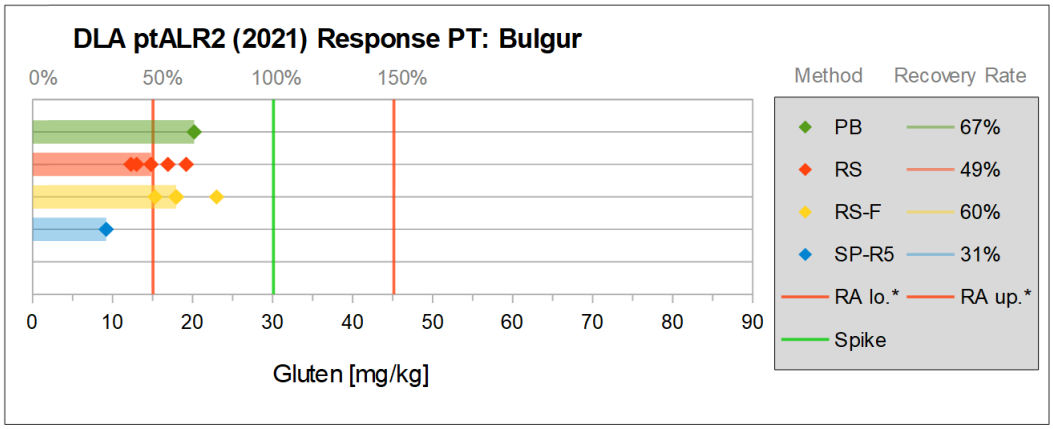
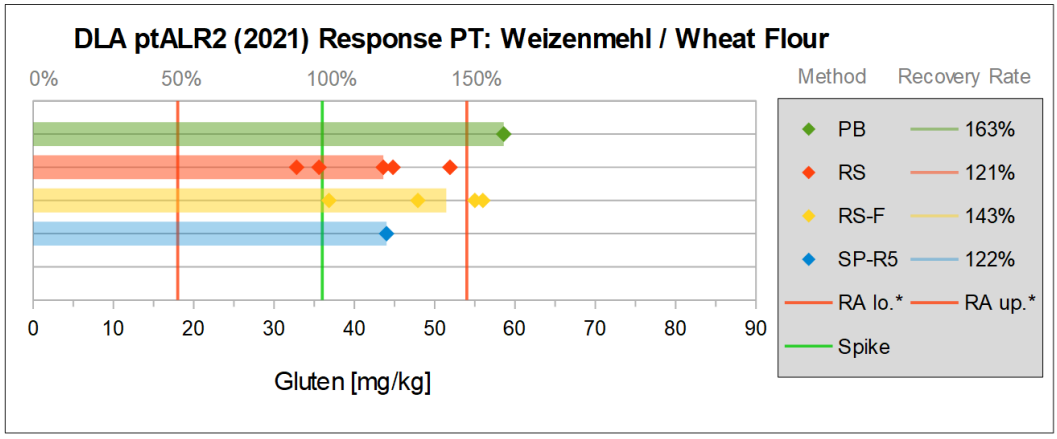


Abb./Fig. 1: Graphs of single results (Samples 1-2) separated by methods with corresponding mean recovery rates, lower scale gluten content in mg/kg, upper scale recovery rate in % with * range of acceptance from 50% - 150% (* range of acceptance: RA lower limit to RA upper limit)

Median of Recovery Rates: Samples 3-5





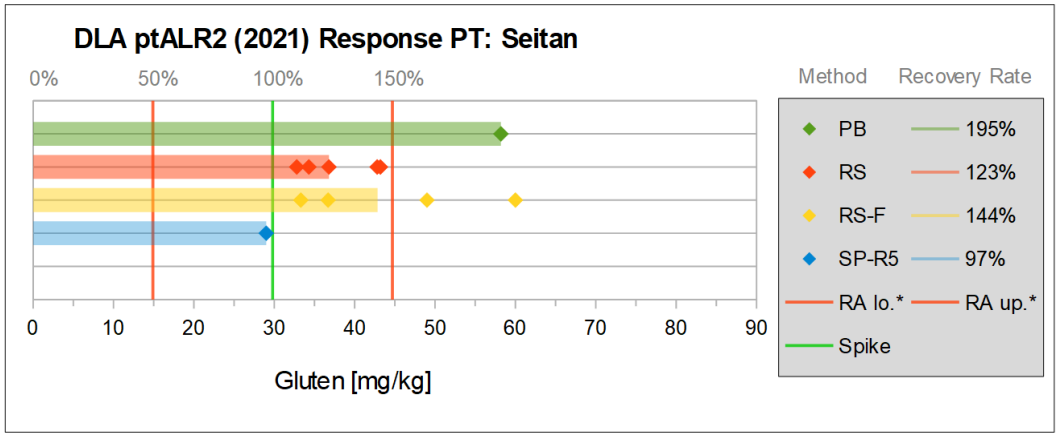


Abb./Fig. 2: Graphs of single results (Samples 3-5) separated by methods with corresponding mean recovery rates, lower scale gluten content in mg/kg, upper scale recovery rate in % with * range of acceptance from 50% - 150% (* range of acceptance: RA lower limit to RA upper limit)

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 13 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.

DLA Proficiency Tests

Date: 11 November 2025

Ulrike Vorreiter
- signed U. Vorreiter