

PRODUCT INFORMATION SHEET
Dietary Fiber, soluble / insoluble Fiber
and Inulin
in Cereal Porridge Powder for Infants
PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	<i>DLA ptAU01 (2024) – Dietary Fiber, soluble / insoluble Fiber and Inulin in Cereal Porridge Powder for Infants – Sample A</i>
Identifier / LOT	<i>RM 2024-AU01 A</i>
Expiry date	<i>August 2028</i>
Matrix	<i>Cereal Porridge</i>
Physical description	<i>Powder</i>
Packaging / weight	<i>Sealed foil pouche / 40 g</i>
Storage conditions	<i>2 - 10°C (dry and dark)</i>
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 * present sample	Sample B *
Wheat flour, organic, type 405 Ingredients: Wheat flour Nutrients** per 100 g: Fat 1,0 g, carbohydrates 71 g, protein 9,8 g - thereof fiber (4,0 %) **	32,8 g/100 g 1,31 g/100 g **	31,3 g/100 g 1,25 g/100 g **
Cereal Porridge for Infants, organic Ingredients: Wholemeal oat flour, wholemeal einkorn flour, wholemeal barley flour, wholemeal rye flour, vitamin B1 (thiamine) Nutrients** per 100 g: Fat 3,2 g, carbohydrates 60 g, protein 13 g - thereof fiber (10,2 %) **	28,8 g/100 g 2,94 g/100 g **	27,4 g/100 g 2,80 g/100 g **
Millet Porridge for Infants, organic Ingredients: Wholemeal millet flour, vitamin B1 (thiamine) Nutrients** per 100 g: Fat 4,1 g, carbohydrates 72 g, protein 12 g - thereof fiber (3,8 %) **	26,4 g/100 g 1,00 g/100 g **	25,2 g/100 g 0,96 g/100 g **
Oat flour, organic Ingredients: Wholemeal oat flour Nutrients** per 100 g: Fat 6,7 g, carbohydrates 60 g, protein 13 g - thereof fiber (9,7 %) **	12,0 g/100 g 1,16 g/100 g **	11,4 g/100 g 1,11 g/100 g **
<i>Sum of dietary fiber ** (without inulin as below)</i>	<i>6,41 g/100 g **</i>	<i>6,12 g/100 g **</i>
Inulin	-	4,69 g/100 g

* Contents according to gravimetric mixture

** Contents according to label

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 were performed with sample sizes of 5 g (Microtracer analysis) and 1 - 5 g (ELISA methods), respectively.

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).

The calculation of the repeatability standard deviations S_r of the participants was also used as an indicator of homogeneity. The coefficient of variation (CV_r) for total dietary fiber without inulin (method 1) is approx. 4,0%. Thus, they were similar to the repeatability standard deviations of the corresponding official methods (e.g. ASU methods / EN ISO methods ASU L 00.00-18 / L 16.08-1 / L 17.03-1 and ASU L 00.00-94).

Reference Values

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

Reference Values quantitative in g/100g

Parameter	Total Dietary Fiber without Inulin	Total Dietary Fiber with Inulin
	Methods: 1	Methods: 2, 3
Number of results	10	6
Number of outliers	0	0
Assigned Value (X_{pt})	5,23	6,51
Robust standard deviation	0,570	0,656
Standard uncertainty	0,225	0,335
Target standard deviation σ_{pt}	0,611	1,03
Target range	4,01 – 6,45	4,46 – 8,56

Methods:

(1) enzymatic-gravimetric methods like ASU L 00.00-18 (ASU L 17.03-1) or AOAC 991.43 and AOAC 985.29, in which lower results of inulin can occur

(2) enzymatic-gravimetric methods combined with liquid chromatography like AOAC 2009.01, which include inulin

(3) Total Dietary Fiber, as Sum of Insoluble DF, High Molecular Weight Soluble DF, and Low Molecular Weight Soluble DF (AOAC 2017.16)

Parameter	Insoluble Dietary Fiber	Soluble Dietary Fiber	Inulin / Fructans
	Methods: 1a, 2a, 3a	Methods: 1b, 2b	Methods: 5, 6
Number of results	10	8	11
Number of outliers	0	0	0
Assigned Value (X_{pt})	3,76	1,72	0,463
Robust standard deviation	0,473	0,618	0,118
Standard uncertainty	0,187	0,273	0,0445
Target standard deviation σ_{pt}	0,518	0,312	0,0562
Target range	2,73 – 4,80	1,09 – 2,34	0,350 – 0,575

Methods:

(1) enzymatic-gravimetric methods like ASU L 00.00-18 (ASU L 17.03-1) or AOAC 991.43 and AOAC 985.29, in which lower results of inulin can occur

(1a + 1b) e.g. inulinase-reaction included

(2) enzymatic-gravimetric methods combined with liquid chromatography like AOAC 2009.01, which include inulin

(2a + 2b) e.g. without inulinase-reaction

(3) Total Dietary Fiber, as Sum of Insoluble DF, High Molecular Weight Soluble DF, and Low Molecular Weight Soluble DF (AOAC 2017.16)

(3a) Insoluble Dietary Fiber (Insoluble DF)

(5) enzymatic methods (e.g. ASU L 00.00-94)

(6) liquid-chromatography methods after enzymatic treatment (e.g. ISO 22579 (IDF 241):2020/AOAC 2016.14)

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 15 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.



Date: 5 August 2025

Ulrike Vorreiter
- signed U. Vorreiter