

PRODUCT INFORMATION SHEET

Sorbitol E420, Mannitol E421, Isomalt E953, Xylitol E967, Erythritol E968 and optional Lactitol E966 in sugar-free Bake Mix Powder

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	<i>DLA ptAU04 (2024) – Sorbitol E420, Mannitol E421, Isomalt E953, Xylitol E967, Erythritol E968 and optional Lactitol E966 in sugar-free Bake Mix Powder</i>
Identifier / LOT	<i>RM 2024-AU04</i>
Expiry date	<i>October 2026</i>
Matrix	<i>Bake Mix Powder</i>
Physical description	<i>Powder</i>
Packaging / weight	<i>Sealed foil pouche / 10 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	Content *
Cake Bake Mix, gluten-free, sugar-free Ingredients: Corn starch, corn flour, rice flour, lentil flour, modified tapioca starch, thickener: guar gum Nutrients per 100 g: Fat 0,2 g, carbohydrates 82 g thereof sugar <0,5 g, dietary fiber 2,5 g, protein 3,6 g, salt 0,01 g	84,8 g/100 g
Cocoa Powder	5,34 g/100g
Baking Powder Ingredients**: Corn starch, acidifier monopotassium tartrate, rising agent sodium hydrogen carbonate (25%)	0,76 g/100g
E420 - Sorbitol	1,24 g/100g
E421 - Mannitol	1,08 g/100g
E953 - Isomalt	2,13 g/100g
E967 - Xylitol	1,57 g/100g
E968 - Erythritol	2,08 g/100g
E966 - Lactitol	1,02 g/100g

* 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).

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 all parameters was $\leq 3,35\%$. Thus, they were similar to the repeatability standard deviations of the corresponding official methods (e.g. ASU methods).

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	Sorbitol	Mannitol	Isomalt*
Number of results	8	7	4
Number of outliers	0	1	0
Assigned Value (X_{pt})	1,24	1,06	2,12
Robust standard deviation	0,0453	0,0586	0,772
Standard uncertainty	0,0200	0,0277	-
Target standard deviation σ_{pt}	0,0481	0,0421	-
Target range	1,15 – 1,34	0,977 – 1,14	-

* Due to the heterogeneity and low number of <5 results no statistical evaluation was done.

Parameter	Xylitol	Erythritol	Lactitol*
Number of results	8	7	4
Number of outliers	0	0	0
Assigned Value (X_{pt})	1,62	2,11	0,968
Robust standard deviation	0,147	0,0961	0,198
Standard uncertainty	0,0648	0,0454	-
Target standard deviation σ_{pt}	0,0884	0,0754	-
Target range	1,44 – 1,79	1,96 – 2,26	-

* Due to the heterogeneity and low number of <5 results no statistical evaluation was done.

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 8 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: 16 April 2025

Ulrike Vorreiter
- signed U. Vorreiter