

PRODUCT INFORMATION SHEET

Free Amino Acids and Taurine in Food (Infant Food)

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	<i>DLA ptSU10 (2021): Free Amino Acids and Taurine in Food (Infant Food)</i>
Identifier / LOT	<i>RM 2023-SU10</i>
Expiry date	<i>January 2028</i>
Matrix	<i>Infant milk powder</i>
Physical description	<i>Powder</i>
Packaging / weight	<i>Sealed foil pouche / 10 g</i>
Storage conditions	<i>2 - 10°C, long term < -18°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
<u>Ingredients:</u> Glucose syrup, vegetable oils, L-arginine, L-aspartate, L-leucine, L-lysine acetate, L-glutamine, L-proline, emulsifier (citric acid ester of mono- and diglycerides of fatty acids), L-valine, glycine, L-isoleucine, potassium orthophosphate, L-threonine, L-phenylalanine, L-tyrosine, L-serine, L-histidine, L-alanine, calcium orthophosphate, potassium citrate, sodium chloride, calcium carbonate, choline tartrate, L-cystine, calcium glycerophosphate, L-tryptophan, calcium citrate, magnesium chloride, oil from <i>Cryptocodium cohnii</i> and <i>Mortierella alpina</i>, L-methionine, tri-calcium phosphate, magnesium-L-aspartate, inositol, vitamin C, antioxidants (lecithins, L-ascorbyl palmitate), taurine, iron-II-sulfate, zinc sulfate, L-carnitine, vitamin E, nucleotides (sodium salts of uridine-, cytidine-, inosine-, adenosine-, guanosine-5-monophosphate), niacin, pantothenic acid, copper sulfate, vitamin B1, vitamin B2, vitamin B6, vitamin A, potassium iodide, manganese II-sulfate, folic acid, vitamin K, sodium selenite, chromium chloride, sodium molybdate, biotin, vitamin D, vitamin B12 <u>Nutrients per 100 g:</u> Fat 26 g, carbohydrates 53 g thereof sugar 4,6 g, protein 13 g, salt 0,5 g

Minimum Sample Size

A minimum sample size of 5 g is recommended for sample preparation.

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 calculation of the repeatability standard deviation S_r of the duplicate determinations of the participants was used as an indicator of homogeneity. For all analytes it was in the range of 1,9% to 9,3%. Therefore, the repeatability standard deviations are similar to precision data of the referring standardized methods (e.g. ASU §64 L 49.07-1).

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	L-Alanine	L-Arginine	L-Aspartic acid
Numbers of results [°]	12	11	11
Number of outliers	-	-	-
Assigned Value (X_{pt})	0,612	1,02	0,987
Robust standard deviation	0,0442	0,0921	0,0644
Standard uncertainty	0,0239	0,0347	0,0243
Target standard deviation σ_{pt}	0,0264	0,139	0,0556
Target range	0,559 - 0,665	0,743 - 1,30	0,876 - 1,10

[°] without outliers

Parameter	L-Cystine	L-Glutamine	Glycine
Numbers of results [°]	6	9	11
Number of outliers	0	1	0
Assigned Value (X_{pt})	0,399	1,25	0,929
Robust standard deviation	0,0211	0,114	0,111
Standard uncertainty	0,0108	0,0474	0,0417
Target standard deviation σ_{pt}	0,0183	0,0677	0,0635
Target range	0,362 - 0,435	1,11 - 1,38	0,802 - 1,06

[°] without outliers

Parameter	L-Histidine	L-Isoleucine	L-Leucine
Numbers of results [°]	10	12	12
Number of outliers	1	-	-
Assigned Value (X_{pt})	0,586	0,931	1,56
Robust standard deviation	0,0795	0,0762	0,0660
Standard uncertainty	0,0314	0,0275	0,0238
Target standard deviation σ_{pt}	0,0940	0,0376	0,0582
Target range	0,397 - 0,774	0,856 - 1,01	1,44 - 1,67

[°] without outliers

Parameter	L-Lysine	L-Methionine	L-Phenylalanine
Numbers of results [°]	11	11	12
Number of outliers	-	1	-
Assigned Value (X_{pt})	1,03	0,256	0,695
Robust standard deviation	0,0994	0,0242	0,0934
Standard uncertainty	0,0375	0,00911	0,0337
Target standard deviation σ_{pt}	0,131	0,0170	0,0536
Target range	0,769 - 1,29	0,222 - 0,290	0,587 - 0,802

[°] without outliers

Parameter	L-Proline	L-Serine	L-Threonine
Numbers of results [°]	10	11	12
Number of outliers	-	1	-
Assigned Value (X_{pt})	1,12	0,696	0,785
Robust standard deviation	0,0598	0,0205	0,0521
Standard uncertainty	0,0236	0,00773	0,0188
Target standard deviation σ_{pt}	0,0677	0,0294	0,0468
Target range	0,984 - 1,25	0,637 - 0,755	0,691 - 0,878

[°] without outliers

Parameter	L-Tryptophan	L-Tyrosine
Numbers of results [°]	12	12
Number of outliers	-	-
Assigned Value (Xpt)	0,294	0,696
Robust standard deviation	0,0179	0,0584
Standard uncertainty	0,0065	0,0211
Target standard deviation σ_{pt}	0,0141	0,0511
Target range	0,265 - 0,322	0,594 - 0,799

[°] without outliers

Parameter	L-Valine	Taurine
Numbers of results [°]	12	9
Number of outliers	-	1
Assigned Value (Xpt)	0,992	0,0323
Robust standard deviation	0,105	0,00401
Standard uncertainty	0,0379	0,00167
Target standard deviation σ_{pt}	0,0614	0,00273
Target range	0,869 - 1,11	0,0268 - 0,0377

[°] without outliers

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.



Date: 15 December 2025

Ulrike Vorreiter
- signed U. Vorreiter