

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 (2025) – Free Amino Acids and Taurine in Food (Infant Food)</i>
Identifier / LOT	<i>RM 2025-SU10</i>
Expiry date	<i>January 2027</i>
Matrix	<i>Infant Food</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

Infant Milk Powder

Ingredients:

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 *Cryptocodium cohnii* and *Mortierella alpina*, 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

Nutrients per 100 g: Fat 26 g, carbohydrates 53 g thereof sugar 4,6 g, protein 13 g, salt 0,5 g

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).

The calculation of the **repeatability standard deviations S_r of the participants** was also used as an indicator of homogeneity. For all parameters the repeatability standard deviation was $\leq 10\%$. Thus, they were similar to corresponding repeatability standard deviations of precision data of the standardized methods (e.g. ASU methods / EN ISO methods).

The repeatability standard deviations of the participants' results are given in the documentation in the statistic data.

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
Number of results	12°	13	13
Number of outliers	1	-	-
Assigned Value (Xpt)	0,613	1,05	1,00
Robust standard deviation	0,0280	0,0541	0,0463
Standard uncertainty	0,0101	0,0188	0,0161
Target standard deviation σ_{pt}	0,0264	0,143	0,0401
Target range	0,560 – 0,665	0,766 – 1,34	0,922 – 1,08

° without outlier

Parameter	L-Cystine	L-Cystine + Sum of L-Cysteine and L-Cystine (Info)*	L-Glutamine
Number of results	8	10°	7
Number of outliers	-	1	-
Assigned Value (Xpt)	0,411	0,400	1,29
Robust standard deviation	0,0234	0,0403	0,0628
Standard uncertainty	0,0104	0,0159	0,0297
Target standard deviation σ_{pt}	0,0721	0,0700	0,0864
Target range	0,267 – 0,555	0,259 – 0,540	1,12 – 1,46

* Since the samples contained no L-cysteine two results determined as sum of L-cysteine and L-cystin were evaluated together with the results for L-cystine for information.

° without outlier / (Info): for information only

Parameter	Glycine	L-Histidine	L-Isoleucine
Number of results	12	11°	13°
Number of outliers	-	2	1
Assigned Value (Xpt)	0,925	0,581	0,913
Robust standard deviation	0,0828	0,0221	0,0215
Standard uncertainty	0,0299	0,00833	0,00746
Target standard deviation σ_{pt}	0,0562	0,0933	0,0417
Target range	0,812 – 1,04	0,394 – 0,768	0,830 – 0,997

° without outlier

Parameter	L-Leucine	L-Lysine	L-Methionine
Number of results	13°	13°	13°
Number of outliers	1	1	1
Assigned Value (Xpt)	1,53	1,09	0,264
Robust standard deviation	0,0625	0,0765	0,0204
Standard uncertainty	0,0217	0,0265	0,00708
Target standard deviation σ_{pt}	0,0576	0,139	0,0175
Target range	1,42 – 1,65	0,811 – 1,37	0,229 – 0,299

° without outlier

Parameter	L-Phenylalanine	L-Proline	L-Serine
Number of results	13°	13°	13°
Number of outliers	1	1	1
Assigned Value (X_{pt})	0,725	1,11	0,698
Robust standard deviation	0,0308	0,0322	0,0490
Standard uncertainty	0,0107	0,0112	0,0170
Target standard deviation σ_{pt}	0,0436	0,0672	0,0517
Target range	0,638 – 0,813	0,977 – 1,25	0,595 – 0,801

° without outlier

Parameter	L-Threonine	L-Tryptophan	L-Tyrosine
Number of results	13°	9	13°
Number of outliers	1	-	1
Assigned Value (X_{pt})	0,770	0,305	0,698
Robust standard deviation	0,0505	0,0115	0,0438
Standard uncertainty	0,0175	0,00480	0,0152
Target standard deviation σ_{pt}	0,0175	0,0146	0,0513
Target range	0,679 – 0,862	0,276 – 0,335	0,596 – 0,801

° without outlier

Parameter	L-Valine	Taurine
Number of results	13°	8°
Number of outliers	1	3
Assigned Value (X_{pt})	1,04	0,0318
Robust standard deviation	0,0458	0,00194
Standard uncertainty	0,0159	0,000859
Target standard deviation σ_{pt}	0,0413	0,00214
Target range	0,956 – 1,12	0,0275 – 0,0361

° without outlier

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 14 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.



created	approved (PT-Coordinator)	updated
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29 January 2026	27 March 2026	-