PRODUCT INFORMATION SHEET

Food Supplement II: B, Ca, Cr, Cu, Fe, K, Mg, Mn, Mo, P, Se, Zn

PT originated REFERENCE MATERIAL (RM)

Description of the RM

Name / Material of related PT	*DLA 47-2019 Food Supplement II: B, Ca, Cr, Cu, Fe, K, Mg, Mn, Mo, P, Se, Zn*
Identifier / LOT	*RM 2019-47*
Expiry date	*December 2026*
Matrix	*Food supplement (Multi mineral powder)*
Physical description	*Powder*
Packaging / weight	*Sealed foil pouche / 10 g*
Storage conditions	*room temperature*
Name and address manufacturer	***DLA - Proficiency Tests GmbH*** *Kalte Weide 21, 24641 Sievershütten, 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
Ingredients (1. Food Supplement, Tablets): Calcium carbonate, microcrystalline cellulose, ascorbic acid, magnesium oxide, calcium phosphate, potassium chloride, croscarmellose sodium, nitcotinamide, iron fumarate, d-alpha tocopherol acetate, release agents: magnesium salts of fatty acids, silicon dioxide, zinc oxide, calcium pantothenate, coating: hypromellose and polyvinyl alcohol, manganese sulfate, riboflavin, pyridoxine HCl, thiamine mononitrate, copper sulfate, vitamin A acetate, folic acid, potassium iodide, sodium tetraborate, sodium selenite, biotin, vitamin K1, sodium molybdate, chromium chloride, cholecalciferol, cyanocobalamin. Ingredients (2. Food Supplement, Capsule powder without capsule shells): Dicalcium phosphate, magnesium oxide, vitamin C, potassium chloride, niacin, release agent magnesium stearate, vitamin E acetate, calcium D-pantothenate, iron sulfate, zinc oxide, vitamin B6 hydrochloride, copper sulfate, vitamin B2, vitamin B1 mononitrate, vitamin A acetate, folic acid, biotin, potassium iodide, chromium-III-chloride, sodium molybdate, sodium selenite, vitamin K1, vitamin D3, vitamin B12. Ingredients (3. Food Supplement, Capsule powder without capsule shells): Boron citrate, boron aspartate, boron-gycinate, microcrystalline cellulose, riboflavin. Further Ingredient: Maltodextrin

Minimum Sample Size

A minimum sample size of 5 g is recommended for sample preparation.
The mixture homogeneity before bottling was examined 8-fold by determination of copper by ICP-MS. The repeatability standard deviation was 2,45% and is less than the range of repeatability standard deviations of comparable methods (e.g. ASU §64 L 00.00-144).
The calculation of the repeatability standard deviations Sr of the participants was also used as an indicator of homogeneity. For all parameters they are <4,5% (1,3% - 4,5%). 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 mg/100g or µg/100g

Parameter	B-Boron [mg/100g]	Ca-Calcium [mg/100g]	Cr-Chromium [µg/100g]
Numbers of results	9	12	10
Number of outliers	0	0	1
Assigned Value (Xpt)	***63,7***	***5250***	***1350***
Robust standard deviation	2,58	365	206
Standard uncertainty	1,07	132	81,3
Target standard deviation σpt	3,86	398	146
Target range	***56,0 - 71,5***	***4450 - 6040***	***1060 - 1650***

Parameter	Cu-Copper [mg/100g]	Fe-Iron [mg/100g]	K-Potassium [mg/100g]
Numbers of results	12	12	12
Number of outliers	0	0	0
Assigned Value (Xpt)	***44,1***	***341***	***1940***
Robust standard deviation	2,38	13,3	72,1
Standard uncertainty	0,86	4,79	26
Target standard deviation σpt	2,82	0,83	70,3
Target range	***38,4 - 49,7***	***309 - 373***	***1800 - 2080***

Parameter	Mg-Magnesium [mg/100g]	Mn-Manganese [mg/100g]	Mo-Molybdenum [µg/100g]
Numbers of results	11	11	10
Number of outliers	0	0	0
Assigned Value (Xpt)	***3450***	***39,0***	***1230***
Robust standard deviation	248	2,61	197
Standard uncertainty	93,5	0,98	78
Target standard deviation σpt	242	2,54	134
Target range	***2970 - 3930***	***33,9 - 44,1***	***957 - 1500***

Parameter	P-Phosphorus [mg/100g]	Se-Selenium [µg/100g]	Zn-Zinc [mg/100g]
Numbers of results	9	11	12
Number of outliers	0	0	0
Assigned Value (Xpt)	***1740***	***1960***	***317***
Robust standard deviation	73,2	99,2	11,8
Standard uncertainty	30,5	37,4	4,27
Target standard deviation σpt	64	201	15,1
Target range	***1620 - 1870***	***1560 - 2360***	***287 - 347***

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 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.

DLA Proficiency Tests

Date: 8 January 2026

Ulrike Vorreiter
- signed U. Vorreiter