

# PRODUCT INFORMATION SHEET

## **Vitamins B1, B2, B6, B12, Biotin, Vitamin C, Folic Acid, Niacin and Pantothenic Acid in Drink Powder (Meal Replacement)**

*PT originated REFERENCE MATERIAL (RM)*

### Description of the RM

|                               |                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name / Material of related PT | DLA ptSU06 (2025) – Dietetic Food I: Vitamins B1, B2, B6, B12, Biotin, Vitamin C, Folic Acid, Niacin and Pantothenic Acid in Drink Powder                                          |
| Identifier / LOT              | RM 2025-SU06                                                                                                                                                                       |
| Expiry date                   | January 2027                                                                                                                                                                       |
| Matrix                        | Drink Powder                                                                                                                                                                       |
| Physical description          | Powder                                                                                                                                                                             |
| Packaging / weight            | Sealed foil poche / 50 g                                                                                                                                                           |
| Storage conditions            | 2 - 10°C (dry and dark)                                                                                                                                                            |
| Name and address manufacturer | <b>DLA - Proficiency Tests GmbH</b><br>Hauptstr. 80, 23845 Oering, Germany<br>Tel. ++49-(0)4532-9183358, Fax. ++49(0)4102-9944976<br>eMail. pt@dla-lvu.de, website. www.dla-lvu.de |

### Composition of Material

#### Drink Powder with Cocoa

##### Meal replacement 1,

Ingredients: Soy protein isolate, whole grain oat flour, oat fiber, corn starch, soybean oil, anti-caking agent: silicon dioxide, vitamin and mineral blend (magnesium oxide, vitamin C, iron fumarate, maltodextrin, potassium iodate, niacin, vitamin A, zinc oxide, sodium selenite, pantothenic acid, biotin, vitamin B12, vitamin D, copper sulfate, vitamin B6, vitamin B2, vitamin K, vitamin B1, manganese sulfate, chromium(III) chloride, folic acid), soy lecithin, natural vanilla flavoring, sweetener sucralose, vitamin E, Antioxidants: ascorbyl palmitate, tocopheryl-containing extracts

##### Meal replacement 2, chocolate

Ingredients: Pea protein, maltodextrin, carob germ protein, sunflower oil, defatted cocoa powder, flavoring, potassium phosphate, thickener (sodium carboxymethylcellulose), anti-caking agent (silicon dioxide), calcium salts of orthophosphoric acid, L-carnitine, sweeteners (sodium cyclamate, saccharin), table salt, magnesium hydroxide, acidifier (tartaric acid), L-ascorbic acid, ferrous sulfate, zinc sulfate, nicotinamide, calcium D-pantothenate, DL-alpha-tocopheryl acetate, pyridoxine hydrochloride, riboflavin, thiamine mononitrate, retinyl acetate, copper gluconate, pteroylmonoglutamic acid, potassium iodide, antioxidant (alpha-tocopherol), phyloquinone (vitamin K1), D-biotin, manganese sulfate, cholecalciferol, cyanocobalamin

##### Meal replacement 2, vanilla

Ingredients: Pea protein, maltodextrin, carob germ protein, sunflower oil, flavoring, potassium phosphate, tricalcium phosphate, thickener (sodium carboxymethylcellulose), anti-caking agent (silicon dioxide), magnesium hydroxide, L-carnitine (Carnipure™), sweeteners (sodium cyclamate, saccharin), table salt, acidifier (L(+)-tartaric acid), L-ascorbic acid, D-alpha tocopheryl acetate, nicotinamide, iron diphosphate, zinc oxide, calcium D-pantothenate, manganese sulfate, antioxidant (DL-alpha tocopherol), copper carbonate, pyridoxine hydrochloride, thiamine mononitrate, riboflavin, retinyl acetate, pteroylmonoglutamic acid, potassium iodide, sodium selenite, phyloquinone, D-biotin, cholecalciferol, cyanocobalamin

*continued next page*

### Drink Powder with Cocoa

#### Meal replacement 3

**Ingredients:** Soy protein, Honey, Skimmed milk yogurt powder, Potassium chloride, Calcium citrate, Magnesium carbonate, Magnesium citrate, Silica, Vitamin C, Ferrous fumarate, Colorant riboflavin (Vitamin B2), Niacin, Vitamin E, Zinc oxide, Manganese sulfate, Calcium D-pantothenate, Vitamin B2, Vitamin D, Vitamin B6, Vitamin B1, Vitamin A, Folic acid, Potassium iodide, Vitamin K, Sodium selenite, Biotin, Vitamin B12

#### Meal replacement 4, vanilla

**Ingredients:** Whey protein concentrate, soy protein isolate, milk protein, maltodextrin, inulin, soybean oil, emulsifier (soy lecithin), thickeners (guar gum, xanthan gum), flavoring, potassium citrate, magnesium hydroxide, calcium carbonate, potassium chloride, sweeteners (acesulfame K, sucralose), iron diphosphate, L-ascorbic acid, zinc oxide, nicotinamide, D-alpha-tocopheryl acetate, manganese(II) sulfate, calcium D-pantothenate, antioxidant (DL-alpha-tocopherol), anti-caking agent (silicon dioxide), copper carbonate, pyridoxine hydrochloride, riboflavin, thiamine mononitrate, retinyl acetate, pteroylmonoglutamic acid, sodium selenite, phylloquinone, D-biotin, potassium iodide, cholecalciferol, cyanocobalamin

#### Further Ingredients

Defatted Cocoa Powder (4,5% of total weight) and Lactose

**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  $\leq 10,8\%$ . 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**

| Parameter                     | Vitamin B1<br>(as Thiamine-cation) | Vitamin B2<br>(as Riboflavin) | Vitamin B6<br>(as Pyridoxine) |
|-------------------------------|------------------------------------|-------------------------------|-------------------------------|
|                               | mg/100g                            | mg/100g                       | mg/100g                       |
| Number of results             | 6°                                 | 7                             | 7                             |
| Number of outliers            | 1                                  | -                             | -                             |
| <b>Assigned Value (Xpt)</b>   | <b>0,866</b>                       | <b>3,99</b>                   | <b>0,984</b>                  |
| Robust standard deviation     | 0,107                              | 1,49                          | 0,419                         |
| Standard uncertainty          | 0,0546                             | 0,704                         | 0,198                         |
| Target standard deviation opt | 0,100                              | 0,794                         | 0,227                         |
| <b>Target range</b>           | <b>0,666 – 1,07</b>                | <b>2,40 – 5,58</b>            | <b>0,530 – 1,44</b>           |

| Parameter                     | Vitamin B12<br>(as Cyanocobalamine) | Biotin (Info)*     | Vitamin C<br>(as Ascorbic acid) |
|-------------------------------|-------------------------------------|--------------------|---------------------------------|
|                               | µg/100g                             | µg/100g            | mg/100g                         |
| Number of results             | 6                                   | 7                  | 7                               |
| Number of outliers            | -                                   | -                  | -                               |
| <b>Assigned Value (Xpt)</b>   | <b>1,75</b>                         | <b>32,8</b>        | <b>63,6</b>                     |
| Robust standard deviation     | 0,292                               | 16,6               | 7,81                            |
| Standard uncertainty          | 0,149                               | 7,85               | 3,69                            |
| Target standard deviation opt | 0,386                               | 6,20               | 6,67                            |
| <b>Target range</b>           | <b>0,982 – 2,52</b>                 | <b>20,4 – 45,2</b> | <b>50,2 – 76,9</b>              |

| Parameter                     | Folic acid<br>(as Pteroylmono-glutamic acid) | Niacin             | Pantothenic acid   |
|-------------------------------|----------------------------------------------|--------------------|--------------------|
|                               | µg/100g                                      | mg/100g            | mg/100g            |
| Number of results             | 6                                            | 7°                 | 6°                 |
| Number of outliers            | -                                            | 1                  | 1                  |
| <b>Assigned Value (Xpt)</b>   | <b>157</b>                                   | <b>8,85</b>        | <b>4,68</b>        |
| Robust standard deviation     | 26,6                                         | 4,61               | 0,786              |
| Standard uncertainty          | 13,5                                         | 2,18               | 0,401              |
| Target standard deviation opt | 23,5                                         | 2,29               | 0,420              |
| <b>Target range</b>           | <b>110 - 204</b>                             | <b>4,26 – 13,4</b> | <b>3,84 – 5,52</b> |

° without outliers

\* (Info): for information only

### 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 11 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 |
|----------------------------|--------------------------------|---------|
| Ulrike Vorreiter           | Matthias Besler-Scharf, PhD    | -       |
| <i>signed U. Vorreiter</i> | <i>signed M. Besler-Scharf</i> | -       |
| 29 January 2026            | 27 March 2026                  | -       |