

Reference Material and Inter-laboratory Quality Control Materials Product Summary

November 2024

Version: 1

Assigned Values: Values provided have been generated from Inter-Laboratory Proficiency Programmes (ILPP) or from data provided by laboratories for the purpose of characterisation. The reference material values provided in this summary are the mean of the results after the exclusion of statistical outliers. The Assigned Range provided for the Inter-laboratory QC Materials is the range of test values available for purchase. Each Reference and QC Material comes with a Data Summary Sheet.

Missing Values and Available Tests: For Reference Materials where property values do not meet the statistical criteria, the summary values have not been provided. For this reason, not all tests will be available for every Reference Material of the same matrix. However, if there are 3 or more data points available, an Assigned Value will be provided with the corresponding QC material.

Sample Sizes: Available sample sizes are shown for reference materials.

Ordering Reference Materials and/or Quality Control Materials, acknowledges you have read and understood our terms and conditions. These can be found at: <https://www.global-proficiency.com/terms-conditions>

Note: When ordering QC materials, please quote both the Product ID AND the process run (PR) number.

Reference Material: Anhydrous Milk Fat - Anhydrous Milk Fat

| | | |
|---|--|-----------|
| Matrix: Anhydrous Milk Fat | Product ID | 949-C-1 |
| | Expiry Date | 20 Sep 25 |
| | Sample Size | 100mL |
| | Carotene (mg/kg) | 8.7 |
| | Moisture KF (%) | 0.06 |
| | Peroxide Value (meq O₂/kg) | 0.05 |

QC Material: Anhydrous Milk Fat - Anhydrous Milk Fat

| | | | |
|-----------------------------------|--|-----------|-----------|
| Matrix: Anhydrous Milk Fat | Product ID | 15511-QC | 15510-QC |
| | Process Run | PR11795 | PR11795 |
| | Expiry Date | 13 Sep 25 | 20 Sep 25 |
| | Sample Size | 100mL | 100mL |
| | Alkalinity (mg/kg) | 6 | 5 |
| | Carotene (mg/kg) | 8.5 | 8.9 |
| | Free Fatty Acids (%) | 0.15 | 0.15 |
| | Moisture KF (%) | 0.05 | 0.06 |
| | Peroxide Value (meq O₂/kg) | 0.06 | 0.05 |

QC Material: Milk Powders for Bulk Density - Buttermilk Powder (100 taps)

| | | | |
|--|-------------------------------------|-----------|-----------|
| Matrix: Milk Powders for Bulk Density | Product ID | 13663-QC | 14641-QC |
| | Process Run | PR11646 | PR11795 |
| | Expiry Date | 27 Feb 25 | 30 Apr 25 |
| | Sample Size | 160g | 160g |
| | Bulk Density 100 Taps (g/ml) | 0.71 | 0.69 |

QC Material: Milk Powders for Bulk Density - Instant SMP (100 taps)

| | | |
|--|-------------------------------------|-----------|
| Matrix: Milk Powders for Bulk Density | Product ID | 14643-QC |
| | Process Run | PR11646 |
| | Expiry Date | 27 Feb 25 |
| | Sample Size | 120g |
| | Bulk Density 100 Taps (g/ml) | 0.75 |

QC Material: Milk Powders for Bulk Density - Whole Milk Powder (100 taps)

| | | |
|--|-------------------------------------|-----------|
| Matrix: Milk Powders for Bulk Density | Product ID | 15519-QC |
| | Process Run | PR11646 |
| | Expiry Date | 27 Feb 25 |
| | Sample Size | 120g |
| | Bulk Density 100 Taps (g/ml) | 0.57 |

QC Material: Protein Powders for Bulk Density - Calcium Caseinate (35 taps test only)

| | | |
|---|------------------------------------|----------|
| Matrix: Protein Powders for Bulk Density | Product ID | 14652-QC |
| | Process Run | PR11740 |
| | Expiry Date | 1 Apr 25 |
| | Sample Size | 85g |
| | Bulk Density 35 Taps (g/ml) | 0.37 |

QC Material: Protein Powders for Bulk Density - Sodium Caseinate (35 taps test only)

| | | |
|---|------------------------------------|-----------|
| Matrix: Protein Powders for Bulk Density | Product ID | 14650-QC |
| | Process Run | PR11529 |
| | Expiry Date | 15 Dec 24 |
| | Sample Size | 110g |
| | Bulk Density 35 Taps (g/ml) | 0.57 |

QC Material: Protein Powders for Bulk Density - MPC42 (100 taps test only)

| | | |
|---|-------------------------------------|----------|
| Matrix: Protein Powders for Bulk Density | Product ID | 14649-QC |
| | Process Run | PR11740 |
| | Expiry Date | 1 Apr 25 |
| | Sample Size | 120g |
| | Bulk Density 100 Taps (g/ml) | 0.62 |

QC Material: Protein Powders for Bulk Density - WPC80 (Cheese) 35 taps test only

| | | |
|---|------------------------------------|----------|
| Matrix: Protein Powders for Bulk Density | Product ID | 15522-QC |
| | Process Run | PR11740 |
| | Expiry Date | 1 Apr 25 |
| | Sample Size | 100g |
| | Bulk Density 35 Taps (g/ml) | 0.44 |

Reference Material: Butter - Salted Butter

| | | |
|---------------------------|------------------------------------|-----------|
| Matrix: Butter | Product ID | 944-C-1 |
| | Expiry Date | 27 Feb 25 |
| | Sample Size | 55g |
| | Fat by Difference (%) | 81.60 |
| | Moisture Oven/Hot Plate (%) | 15.74 |
| | SNF (%) | 2.64 |

QC Material: Butter - Salted Butter

| | | |
|---------------------------|------------------------------------|-----------|
| Matrix: Butter | Product ID | 15524-QC |
| | Process Run | PR11646 |
| | Expiry Date | 27 Feb 25 |
| | Sample Size | 55g |
| | Fat by Difference (%) | 81.60 |
| | Moisture Oven/Hot Plate (%) | 15.74 |
| | Salt (%) | 1.48 |
| | SNF (%) | 2.71 |

QC Material: Butter - Unsalted Butter

| | | | |
|---------------------------|------------------------------------|-----------|----------|
| Matrix: Butter | Product ID | 14633-QC | 14634-QC |
| | Process Run | PR11740 | PR11529 |
| | Expiry Date | 23 Jan 25 | 5 Dec 24 |
| | Sample Size | 55g | 55g |
| | Fat by Difference (%) | 83.01 | 83.16 |
| | Moisture Oven/Hot Plate (%) | 15.72 | 15.57 |
| | SNF (%) | 1.20 | 1.29 |

QC Material: Butter for pH testing - Lactic Butter

| | | |
|--|----------------------|-----------|
| Matrix: Butter for pH testing | Product ID | 14636-QC |
| | Process Run | PR11646 |
| | Expiry Date | 28 Jan 25 |
| | Sample Size | 110g |
| | pH (pH units) | 4.78 |

QC Material: Butter for pH testing - Lactic Butter

| | | |
|--|----------------------|-----------|
| Matrix: Butter for pH testing | Product ID | 14637-QC |
| | Process Run | PR11795 |
| | Expiry Date | 30 Apr 25 |
| | Sample Size | 110g |
| | pH (pH units) | 4.79 |

Reference Material: Casein - Mineral Acid Casein (30 Mesh)

| | | |
|---------------------------|-----------------------------|----------|
| Matrix: Casein | Product ID | 861-C-1 |
| | Expiry Date | 9 Aug 25 |
| | Sample Size | 150g |
| | Fat SBR (%) | 0.5 |
| | Free Acidity (ml/g) | 0.07 |
| | pH (pH units) | 4.3 |
| | Protein Kjeldahl (%) | 90.23 |

QC Material: Casein - Mineral Acid Casein (30 Mesh)

| | | |
|-------------------------------|-------------------------------|----------|
| Matrix: Casein | Product ID | 13674-QC |
| | Process Run | PR11095 |
| | Expiry Date | 9 Aug 25 |
| | Sample Size | 150g |
| | Ash (%) | 1.79 |
| | Fat SBR (%) | 0.5 |
| | Free Acidity (ml/g) | 0.08 |
| | Lactose (%) | 0.02 |
| | Moisture 102°C (%) | 8.92 |
| | Part. Size Pass 1st Sieve (%) | 99.8 |
| Part. Size Pass 2nd Sieve (%) | 45.1 | |
| pH (pH units) | 4.3 | |
| Protein Kjeldahl (%) | 90.35 | |

QC Material: Caseinate - Calcium Caseinate

| | | |
|------------------------------|-------------|----------|
| Matrix: Caseinate | Product ID | 14656-QC |
| | Process Run | PR11215 |
| | Expiry Date | 2 Apr 26 |
| | Sample Size | 80g |
| | Ash (%) | 3.91 |
| | Lactose (%) | 0.06 |
| Moisture 102°C (%) | 5.11 | |
| pH 5% Solution (pH units) | 7.03 | |
| Protein Kjeldahl (%) | 91.69 | |

Reference Material: Caseinate - Sodium Caseinate

| | | |
|------------------------------|----------------------------------|-----------|
| Matrix: Caseinate | Product ID | 900-C-2 |
| | Expiry Date | 18 May 26 |
| | Sample Size | 80g |
| | Ash (%) | 3.65 |
| | pH 5% Solution (pH units) | 6.75 |
| | Protein Kjeldahl (%) | 92.05 |

QC Material: Caseinate - Sodium Caseinate

| | | |
|------------------------------|----------------------------------|-----------|
| Matrix: Caseinate | Product ID | 14657-QC |
| | Process Run | PR11529 |
| | Expiry Date | 18 May 26 |
| | Sample Size | 80g |
| | Ash (%) | 3.64 |
| | Fat SBR (%) | 0.5 |
| | Lactose (%) | 0.03 |
| | Moisture 102°C (%) | 5.06 |
| | pH 5% Solution (pH units) | 6.73 |
| | Protein Kjeldahl (%) | 92.15 |

Reference Material: Cheese - Edam Cheese

| | | |
|---------------------------------|--------------------------|-----------|
| Matrix: Cheese | Product ID | 943-C-1 |
| | Expiry Date | 12 Jan 25 |
| | Sample Size | 75g |
| | Calcium (mmol/kg) | 198 |
| | Fat SBR (%) | 26.82 |
| | pH (pH units) | 5.39 |
| | Protein (%) | 27.41 |
| | Salt (%) | 1.97 |

QC Material: Cheese - Edam Cheese

| | | |
|---------------------------------|---------------------------|-----------|
| Matrix: Cheese | Product ID | 14664-QC |
| | Process Run | PR11646 |
| | Expiry Date | 12 Jan 25 |
| | Sample Size | 75g |
| | Calcium (mmol/kg) | 199 |
| | Fat SBR (%) | 26.84 |
| | Moisture 105°C (%) | 40.2 |
| | pH (pH units) | 5.37 |
| | Protein (%) | 27.38 |
| | Salt (%) | 1.98 |

Reference Material: Cheese - Noble (Low Fat Cheddar) Cheese

| | | |
|--------------------------|---------------------------|-----------|
| Matrix: Cheese | Product ID | 948-C-1 |
| | Expiry Date | 14 May 25 |
| | Sample Size | 75g |
| | Calcium (mmol/kg) | 219 |
| | Fat SBR (%) | 26.17 |
| | Moisture 105°C (%) | 38.4 |
| | pH (pH units) | 5.54 |
| | Protein (%) | 29.20 |
| | Salt (%) | 2.20 |

QC Material: Cheese - Noble (Low Fat Cheddar) Cheese

| | | |
|--------------------------|---------------------------|-----------|
| Matrix: Cheese | Product ID | 15533-QC |
| | Process Run | PR11795 |
| | Expiry Date | 14 May 25 |
| | Sample Size | 75g |
| | Calcium (mmol/kg) | 232 |
| | Fat SBR (%) | 26.15 |
| | Moisture 105°C (%) | 38.2 |
| | pH (pH units) | 5.53 |
| | Protein (%) | 29.18 |
| | Salt (%) | 2.20 |

QC Material: Functional Powders - Instant WMP

| Matrix: Functional Powders | Product ID | 15542-QC | 15543-QC | 15544-QC | 15546-QC | 15547-QC | 15545-QC |
|----------------------------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Process Run | PR11646 | PR11646 | PR11646 | PR11795 | PR11795 | PR11795 |
| | Expiry Date | 27 Feb 25 | 27 Feb 25 | 27 Feb 25 | 30 Apr 25 | 30 Apr 25 | 30 Apr 25 |
| | Sample Size | 120g | 120g | 120g | 120g | 120g | 120g |
| | Coffee Sediment (mL) | 0.4 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 |
| | Cold SDP 25°C (A-E) | B | B | C | B | B | B |
| | Dispersibility (%) | 99 | 99 | 99 | 97 | 97 | 97 |
| | Dispersibility (1_7) | 1 | 1 | 1 | 1 | 2 | 1 |
| | Sediment 85°C (mL) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | Wettability 25°C (secs) | 6 | 6 | 6 | 5 | 5 | 24 |

QC Material: Lactose - Edible Lactose

| Matrix: Lactose | Product ID | 13698-QC | 14678-QC |
|--------------------|----------------------------|----------|-----------|
| | Process Run | PR10495 | PR11529 |
| | Expiry Date | 8 Jun 25 | 12 Jan 26 |
| | Sample Size | 80g | 80g |
| | Moist LOD (%) | 0.03 | 0.04 |
| | pH 10% solution (pH units) | 4.53 | 4.61 |
| | Total Moisture KF (%) | 5.00 | 5.03 |

QC Material: Lactose - Pharmaceutical Lactose

| Matrix: Lactose | Product ID | 13699-QC | 14677-QC |
|--------------------|----------------------------|-----------|----------|
| | Process Run | PR10495 | PR11529 |
| | Expiry Date | 13 Jun 25 | 2 May 26 |
| | Sample Size | 80g | 80g |
| | Moist LOD (%) | 0.05 | 0.04 |
| | pH 10% solution (pH units) | 4.32 | 4.47 |
| | Total Moisture KF (%) | 5.07 | 5.14 |

Reference Material: Powders for Micronutrients - WPC80 (Cheese)

| Matrix: Powders for Micronutrients | Product ID | 812-C-1 | 891-C-1 |
|--|----------------------|-----------|----------|
| | Expiry Date | 11 May 25 | 7 Mar 26 |
| | Sample Size | 30g | 30g |
| | Calcium (mg/100g) | 305 | |
| | Chloride (mg/100g) | 61 | 50 |
| | Copper (mg/kg) | | 1.16 |
| | Iron (mg/kg) | 11.0 | 12.9 |
| | Magnesium (mg/100g) | 50.9 | 52.3 |
| | Phosphorus (mg/100g) | 438 | 467 |
| | Potassium (mg/100g) | 250 | 293 |
| | Sodium (mg/100g) | 1145 | 1034 |
| | Zinc (mg/kg) | | 4.1 |

QC Material: Powders for Micronutrients - WPC80 (Cheese)

| Matrix: Powders for Micronutrients | Product ID | 13705-QC | 14687-QC |
|---|-----------------------------|-----------|----------|
| | Process Run | PR10628 | PR11326 |
| | Expiry Date | 11 May 25 | 7 Mar 26 |
| | Sample Size | 30g | 30g |
| | Calcium (mg/100g) | 314 | 295 |
| | Chloride (mg/100g) | 56 | 47 |
| | Copper (mg/kg) | 1.11 | 1.18 |
| | Iodine (µg/100gm) | 10 | 10 |
| | Iron (mg/kg) | 11.3 | 13.1 |
| | Magnesium (mg/100g) | 51.4 | 53.4 |
| | Phosphorus (mg/100g) | 447 | 467 |
| | Potassium (mg/100g) | 250 | 298 |
| | Sodium (mg/100g) | 1119 | 1054 |
| | Zinc (mg/kg) | 3.4 | 4.5 |

Reference Material: Powders for Micronutrients - Instant WMP

| Matrix: Powders for Micronutrients | Product ID | 813-C-1 | 892-C-1 | 953-C-1 |
|---|-----------------------------|----------|----------|-----------|
| | Expiry Date | 7 Apr 25 | 7 Apr 25 | 27 Mar 27 |
| | Sample Size | 30g | 30g | 30g |
| | Calcium (mg/100g) | 765 | | 774 |
| | Chloride (mg/100g) | 572 | 555 | |
| | Copper (mg/kg) | 0.15 | | 0.13 |
| | Iron (mg/kg) | 108.9 | | 1.7 |
| | Magnesium (mg/100g) | | 74.6 | 73.1 |
| | Manganese (µg/100g) | | 28 | 24 |
| | Phosphorus (mg/100g) | 590 | 586 | 557 |
| | Potassium (mg/100g) | 806 | 801 | 780 |
| | Sodium (mg/100g) | 225 | 220 | 236 |
| | Zinc (mg/kg) | | 50.1 | 27.4 |

QC Material: Powders for Micronutrients - Instant WMP

| Matrix: Powders for Micronutrients | Product ID | 13703-QC | 14683-QC | 14682-QC | 14684-QC |
|--|----------------------|----------|----------|----------|-----------|
| | Process Run | PR10628 | PR11326 | PR10755 | PR11795 |
| | Expiry Date | 7 Apr 25 | 7 Apr 25 | 9 Oct 25 | 27 Mar 27 |
| | Sample Size | 30g | 30g | 30g | 30g |
| | | | | | |
| | Calcium (mg/100g) | 777 | 789 | 788 | 779 |
| | Chloride (mg/100g) | 571 | 552 | 577 | 592 |
| | Copper (mg/kg) | 0.15 | 0.13 | 0.24 | 0.13 |
| | Iodine (µg/100gm) | 42 | 36 | | |
| | Iron (mg/kg) | 109.5 | 109.3 | 1.4 | 1.6 |
| | Magnesium (mg/100g) | 76.9 | 75.1 | 70.0 | 72.4 |
| | Manganese (µg/100g) | 29 | 29 | 22 | 24 |
| | Phosphorus (mg/100g) | 599 | 584 | 631 | 553 |
| | Potassium (mg/100g) | 806 | 805 | 999 | 799 |
| | Sodium (mg/100g) | 226 | 223 | 204 | 239 |
| | Zinc (mg/kg) | 51.0 | 50.5 | 24.7 | 27.0 |

Reference Material: Powders for Micronutrients - WPC80 (Mineral Acid)

| Matrix: Powders for Micronutrients | Product ID | 952-C-1 |
|--|----------------------|----------|
| | Expiry Date | 6 Apr 27 |
| | Sample Size | 30g |
| | | |
| | Calcium (mg/100g) | 371 |
| | Copper (mg/kg) | 0.40 |
| | Iron (mg/kg) | 3.9 |
| | Magnesium (mg/100g) | 27.1 |
| | Manganese (µg/100g) | 15 |
| | Phosphorus (mg/100g) | 360 |
| | Sodium (mg/100g) | 52 |
| | Zinc (mg/kg) | 19.2 |

QC Material: Powders for Micronutrients - WPC80 (Mineral Acid)

| Matrix: Powders for Micronutrients | Product ID | 14685-QC | 14686-QC |
|---|-----------------------------|-----------|----------|
| | Process Run | PR10755 | PR11795 |
| | Expiry Date | 16 Sep 25 | 6 Apr 27 |
| | Sample Size | 30g | 30g |
| | Calcium (mg/100g) | 353 | 382 |
| | Chloride (mg/100g) | 112 | 149 |
| | Copper (mg/kg) | 0.58 | 0.40 |
| | Iron (mg/kg) | 2.7 | 3.9 |
| | Magnesium (mg/100g) | 21.8 | 27.5 |
| | Manganese (µg/100g) | | 15 |
| | Phosphorus (mg/100g) | 312 | 361 |
| | Potassium (mg/100g) | 1685 | 1703 |
| | Sodium (mg/100g) | 39 | 51 |
| | Zinc (mg/kg) | 15.9 | 19.0 |

Reference Material: Powders for Micronutrients - Skim Milk Powder

| Matrix: Powders for Micronutrients | Product ID | 763-C-1 | 893-C-1 | 954-C-1 |
|---|-----------------------------|-----------|-----------|-----------|
| | Expiry Date | 26 Dec 24 | 15 Mar 26 | 27 Jan 27 |
| | Sample Size | 30g | 30g | 30g |
| | Calcium (mg/100g) | 1189 | 1084 | 1089 |
| | Chloride (mg/100g) | 1183 | 761 | 778 |
| | Copper (mg/kg) | 0.23 | 0.19 | 0.24 |
| | Iron (mg/kg) | 1.5 | | |
| | Magnesium (mg/100g) | 118.0 | 104.2 | 102.0 |
| | Manganese (µg/100g) | 26 | 23 | 26 |
| | Phosphorus (mg/100g) | 971 | 808 | 853 |
| | Potassium (mg/100g) | 1871 | 1190 | 1338 |
| | Sodium (mg/100g) | 385 | | 283 |
| | Zinc (mg/kg) | 34.5 | 34.3 | 34.3 |

QC Material: Powders for Micronutrients - Skim Milk Powder

| Matrix: Powders for Micronutrients | Product ID | 14679-QC | 14680-QC | 14681-QC |
|--|--------------------------|-----------|-----------|-----------|
| | Process Run | PR10755 | PR11326 | PR11795 |
| | Expiry Date | 13 Oct 25 | 15 Mar 26 | 27 Jan 27 |
| | Sample Size | 30g | 30g | 30g |
| | Calcium (mg/100g) | 1200 | 1093 | 1088 |
| Chloride (mg/100g) | 1006 | 758 | 769 | |
| Copper (mg/kg) | 0.45 | 0.19 | 0.24 | |
| Iodine (µg/100gm) | | 61 | | |
| Iron (mg/kg) | 1.5 | 2.0 | 1.8 | |
| Magnesium (mg/100g) | 112.6 | 105.5 | 103.6 | |
| Manganese (µg/100g) | 30 | 25 | 26 | |
| Phosphorus (mg/100g) | 1018 | 803 | 854 | |
| Potassium (mg/100g) | 1790 | 1202 | 1336 | |
| Sodium (mg/100g) | 346 | 297 | 283 | |
| Zinc (mg/kg) | 34.8 | 34.6 | 34.4 | |

QC Material: Milk Powder - Buttermilk Powder

| Matrix: Milk Powder | Product ID | 15529-QC |
|-------------------------------------|-------------------|----------|
| | Process Run | PR11646 |
| | Expiry Date | 9 Feb 26 |
| | Sample Size | 80g |
| | Fat RG (%) | 8.48 |
| Insolubility Index 24°C (mL) | 0.08 | |
| Moisture 102°C (%) | 3.79 | |
| Moisture Reference Dryer (%) | 3.82 | |
| Protein Kjeldahl (%) | 30.28 | |
| Titrateable Acidity (%) | 0.101 | |

Reference Material: Milk Powder - Skim Milk Powder

| Matrix: Milk Powder | Product ID | 941-C-1 | 837-C-1 | 858-C-1 | 951-C-1 |
|---------------------|-----------------------------|-----------|-----------|-----------|-----------|
| | Expiry Date | 21 Feb 25 | 26 Oct 25 | 18 Nov 25 | 10 Sep 26 |
| | Sample Size | 80g | 80g | 80g | 80g |
| | Fat RG (%) | | 0.73 | 0.72 | 0.90 |
| | Moisture 102°C (%) | 3.72 | | 3.68 | 3.73 |
| | pH (pH units) | 6.76 | 6.77 | 6.76 | 6.75 |
| | Protein Kjeldahl (%) | 32.71 | 32.68 | 32.82 | |
| | WPNI (mg/g) | | | 3.6 | |

QC Material: Milk Powder - Skim Milk Powder

| Matrix: Milk Powder | Product ID | 14693-QC | 13732-QC | 14691-QC | 14694-QC |
|---------------------|-------------------------------------|-----------|-----------|-----------|-----------|
| | Process Run | PR11646 | PR10923 | PR11024 | PR11795 |
| | Expiry Date | 21 Feb 25 | 26 Oct 25 | 18 Nov 25 | 10 Sep 26 |
| | Sample Size | 80g | 80g | 80g | 80g |
| | Fat RG (%) | 0.90 | 0.72 | | 0.90 |
| | Insolubility Index 24°C (mL) | 0.09 | 0.08 | 0.10 | 0.10 |
| | Moisture 102°C (%) | 3.72 | 3.80 | | 3.70 |
| | Moisture Reference Dryer (%) | 3.74 | 3.84 | 3.67 | 3.83 |
| | pH (pH units) | 6.73 | 6.77 | | 6.76 |
| | Protein Kjeldahl (%) | 32.73 | 32.72 | 32.89 | 32.61 |
| | Titrateable Acidity (%) | 0.094 | 0.099 | | 0.094 |
| | WPNI (mg/g) | 2.6 | 3.8 | 3.7 | 6.4 |

QC Material: Milk Powder - Skim Milk Powder

| | | |
|----------------------------|-------------------------------------|-----------|
| Matrix: Milk Powder | Product ID | 13785-QC |
| | Process Run | PR11811 |
| | Expiry Date | 25 Oct 25 |
| | Sample Size | 30g |
| | RDW WPNI Low Heat SMP (mg/g) | 6.32 |

Reference Material: Milk Powder - Whole Milk Powder

| Matrix: Milk Powder | Product ID | 884-C-1 | 883-C-1 | 940-C-1 | 950-C-1 |
|----------------------------|---------------------------------|-----------|----------|-----------|-----------|
| | Expiry Date | 27 Feb 25 | 9 Mar 25 | 19 Sep 25 | 19 Sep 25 |
| | Sample Size | 80g | 80g | 80g | 80g |
| | Ash (%) | 4.93 | 4.49 | 4.98 | 5.68 |
| | Fat RG (%) | 28.00 | 26.40 | 26.33 | 28.17 |
| | Free Fat - in powder (%) | 1.70 | 0.45 | | |
| | Moisture 102°C (%) | 2.80 | 2.93 | 2.40 | 3.07 |
| | Moisture KF (%) | | 3.28 | | |
| | pH (pH units) | 6.74 | 6.77 | 6.78 | 6.70 |
| | Protein Kjeldahl (%) | 23.54 | 24.53 | 24.16 | 23.61 |
| | WPNI (mg/g SNF) | 3.1 | 3.8 | 3.8 | 0.5 |

QC Material: Milk Powder - Whole Milk Powder

| Matrix: Milk Powder | Product ID | 14704-QC | 14705-QC | 14709-QC | 14707-QC | 14708-QC |
|---------------------|------------------------------|-----------|----------|-----------|-----------|-----------|
| | Process Run | PR11253 | PR11253 | PR11795 | PR11795 | PR11646 |
| | Expiry Date | 27 Feb 25 | 9 Mar 25 | 15 Apr 25 | 19 Sep 25 | 19 Sep 25 |
| | Sample Size | 80g | 80g | 80g | 80g | 80g |
| | Ash (%) | 4.93 | 4.50 | 4.27 | 5.67 | 4.97 |
| | Fat RG (%) | | 26.43 | 28.04 | 28.21 | 26.35 |
| | Free Fat - in powder (%) | 1.70 | 0.47 | 1.60 | 1.54 | 0.75 |
| | Insolubility Index 24°C (mL) | 0.15 | 0.10 | 0.12 | 0.21 | 0.50 |
| | Moisture 102°C (%) | | 2.91 | 2.97 | 3.07 | 2.39 |
| | Moisture KF (%) | 3.17 | 3.30 | 3.39 | 3.50 | |
| | Moisture Reference Dryer (%) | 2.88 | 3.00 | 3.14 | 3.18 | 2.49 |
| | pH (pH units) | 6.74 | 6.76 | 6.80 | 6.71 | 6.77 |
| | Protein Combustion (%) | | | 23.24 | 23.62 | |
| | Protein Kjeldahl (%) | | 24.53 | 23.24 | 23.64 | 24.17 |
| | Titrateable Acidity (%) | 0.085 | 0.078 | 0.072 | 0.103 | 0.088 |
| | WPNI (mg/g SNF) | 3.0 | 3.6 | 2.3 | 0.5 | 3.6 |

Reference Material: Milk Protein Concentrate - MPC42

| Matrix: Milk Protein Concentrate | Product ID | 942-C-1 |
|----------------------------------|---------------------------|-----------|
| | Expiry Date | 23 Mar 25 |
| | Sample Size | 80g |
| | Moisture 102°C (%) | 3.30 |
| | pH 5% Solution (pH units) | 6.98 |
| | Protein Kjeldahl (%) | 42.61 |

QC Material: Milk Protein Concentrate - MPC42

| Matrix: Milk Protein Concentrate | Product ID | 14688-QC |
|----------------------------------|-------------|-----------|
| | Process Run | PR11646 |
| | Expiry Date | 23 Mar 25 |
| | Sample Size | 80g |
| | Ash (%) | 5.50 |
| Fat RG (%) | 26.06 | |
| Insolubility Index 40°C (mL) | 0.12 | |
| Moisture 102°C (%) | 3.31 | |
| pH 5% Solution (pH units) | 6.98 | |
| Protein Kjeldahl (%) | 42.62 | |
| Tit Acidity 5% Solution (%m/m) | 0.798 | |
| WPNI (mg/g) | 6.1 | |

Reference Material: Milk Protein Concentrate - MPC56

| Matrix: Milk Protein Concentrate | Product ID | 907-C-1 | 947-C-1 |
|----------------------------------|-------------|-----------|-----------|
| | Expiry Date | 23 Nov 24 | 21 Nov 25 |
| | Sample Size | 80g | g |
| | Ash (%) | 7.42 | |
| Fat RG (%) | 0.84 | | |
| Moisture 102°C (%) | | 4.75 | |
| pH 5% Solution (pH units) | 6.95 | 6.96 | |
| Protein Kjeldahl (%) | 56.39 | | |

QC Material: Milk Protein Concentrate - MPC56

| Matrix: Milk Protein Concentrate | Product ID | 13712-QC | 15557-QC |
|----------------------------------|--------------------------------|-----------|-----------|
| | Process Run | PR11473 | PR11795 |
| | Expiry Date | 23 Nov 24 | 21 Nov 25 |
| | Sample Size | 80g | |
| | | | |
| | Ash (%) | 7.41 | 7.43 |
| | Fat RG (%) | 0.82 | 0.87 |
| | Insolubility Index 40°C (mL) | 0.10 | 0.09 |
| | Moisture 102°C (%) | 4.85 | 4.74 |
| | pH 5% Solution (pH units) | 6.94 | 6.96 |
| | Protein Kjeldahl (%) | 56.36 | 56.25 |
| | Tit Acidity 5% Solution (%m/m) | 1.120 | 1.035 |
| | WPNI (mg/g) | 10.3 | 9.9 |

QC Material: Milk Protein Concentrate - MPC70

| Matrix: Milk Protein Concentrate | Product ID | 15556-QC |
|----------------------------------|----------------------|-----------|
| | Process Run | PR11555 |
| | Expiry Date | 12 Dec 24 |
| | Sample Size | 80g |
| | | |
| | Fat RG (%) | 1.21 |
| | Moisture 102°C (%) | 4.97 |
| | Protein Kjeldahl (%) | 69.38 |

Reference Material: Milk Protein Concentrate - MPC80

| | | |
|---|-----------------------------|-----------|
| Matrix: Milk Protein Concentrate | Product ID | 904-C-1 |
| | Expiry Date | 13 Feb 25 |
| | Sample Size | 80g |
| | Fat SBR (%) | 1.21 |
| | Moisture 102°C (%) | 6.22 |
| | Protein Kjeldahl (%) | 77.51 |

QC Material: Milk Protein Concentrate - MPC80

| | | |
|---|----------------------------------|-----------|
| Matrix: Milk Protein Concentrate | Product ID | 14689-QC |
| | Process Run | PR11455 |
| | Expiry Date | 13 Feb 25 |
| | Sample Size | 80g |
| | Ash (%) | 6.83 |
| | Fat SBR (%) | 1.17 |
| | Lactose (%) | 7.98 |
| | Moisture 102°C (%) | 6.18 |
| | pH 5% Solution (pH units) | 6.99 |
| | Protein Kjeldahl (%) | 77.57 |
| | WPNI (mg/g) | 1.7 |

Reference Material: Milk Protein Concentrate - MPC85

| Matrix: Milk Protein Concentrate | Product ID | 903-C-1 |
|----------------------------------|----------------------|----------|
| | Expiry Date | 5 Mar 25 |
| | Sample Size | 80g |
| | Ash (%) | 6.71 |
| | Fat SBR (%) | 1.22 |
| | Moisture 102°C (%) | 5.99 |
| | Protein Kjeldahl (%) | 81.56 |

QC Material: Milk Protein Concentrate - MPC85

| Matrix: Milk Protein Concentrate | Product ID | 14690-QC |
|----------------------------------|---------------------------|----------|
| | Process Run | PR11455 |
| | Expiry Date | 5 Mar 25 |
| | Sample Size | 80g |
| | Ash (%) | 6.71 |
| | Fat SBR (%) | 1.20 |
| | Lactose (%) | 4.61 |
| | Moisture 102°C (%) | 5.97 |
| | pH 5% Solution (pH units) | 7.01 |
| | Protein Kjeldahl (%) | 81.60 |
| | WPNI (mg/g) | 13.8 |

QC Material: Milk Protein Concentrate - MPI

| Matrix: Milk Protein Concentrate | Product ID | 15559-QC |
|----------------------------------|---------------------------|-----------|
| | Process Run | PR11555 |
| | Expiry Date | 13 Jan 26 |
| | Sample Size | 80g |
| | Ash (%) | 6.26 |
| | Fat SBR (%) | 1.84 |
| | Lactose (%) | 1.17 |
| | Moisture 102°C (%) | 5.95 |
| | pH 5% Solution (pH units) | 6.96 |
| | Protein Kjeldahl (%) | 85.73 |

QC Material: Vitamin Milk Powders - Instant SMP

| Matrix: Vitamin Milk Powders | Product ID | 14695-QC | 14697-QC |
|------------------------------|----------------------|-----------|-----------|
| | Process Run | PR11155 | PR11646 |
| | Expiry Date | 27 Aug 25 | 27 Aug 25 |
| | Sample Size | 30g | 30g |
| | Vitamin A (µg/100gm) | 1110 | 999 |
| | Vitamin C (mg/100g) | 10.2 | 15.1 |
| | Vitamin D (µg/100gm) | | 16.0 |

Reference Material: Whey Powder - Whey Powder

| | | |
|------------------------------------|-----------------------------|-----------|
| Matrix: Whey Powder | Product ID | 897-C-1 |
| | Expiry Date | 21 May 25 |
| | Sample Size | 80g |
| | Ash (%) | 8.23 |
| | Fat RG (%) | 0.88 |
| | Moisture 102°C (%) | 1.83 |
| | pH (pH units) | 6.85 |
| | Protein Kjeldahl (%) | 15.72 |

QC Material: Whey Powder - Whey Powder

| | | |
|------------------------------------|-------------------------------------|-----------|
| Matrix: Whey Powder | Product ID | 14702-QC |
| | Process Run | PR11375 |
| | Expiry Date | 21 May 25 |
| | Sample Size | 80g |
| | Ash (%) | 8.22 |
| | Fat RG (%) | 0.90 |
| | Insolubility Index 24°C (mL) | 0.08 |
| | Moisture 102°C (%) | 1.88 |
| | pH (pH units) | 6.86 |
| | Protein Kjeldahl (%) | 15.68 |
| | Salt (%) | 2.89 |
| | Titrateable Acidity (%) | 0.049 |

QC Material: Whey Protein Concentrate - WPC80 (Cheese)

| Matrix: Whey Protein Concentrate | Product ID | 15569-QC |
|---|------------------------------|----------|
| | Process Run | PR11740 |
| | Expiry Date | 8 Apr 26 |
| | Sample Size | 80g |
| | Ash (%) | 2.83 |
| | Fat SBR (%) | 5.1 |
| | Insolubility Index 24°C (mL) | 0.18 |
| | Lactose (%) | 5.14 |
| | Moisture 102°C (%) | 4.48 |
| | pH 5% Solution (pH units) | 6.75 |
| | Protein Kjeldahl (%) | 79.84 |

Reference Material: Whey Protein Concentrate - WPC80 (Lactic Acid)

| Matrix: Whey Protein Concentrate | Product ID | 936-C-1 |
|---|---------------------------|-----------|
| | Expiry Date | 14 Oct 25 |
| | Sample Size | 80g |
| | Fat SBR (%) | 2.9 |
| | Moisture 102°C (%) | 5.00 |
| | pH 5% Solution (pH units) | 6.59 |
| | Protein Kjeldahl (%) | 80.47 |

QC Material: Whey Protein Concentrate - WPC80 (Lactic Acid)

| | | |
|---|------------------------------|-----------|
| Matrix: Whey Protein Concentrate | Product ID | 14713-QC |
| | Process Run | PR11608 |
| | Expiry Date | 14 Oct 25 |
| | Sample Size | 80g |
| | Ash (%) | 3.47 |
| | Fat SBR (%) | 2.9 |
| | Insolubility Index 24°C (mL) | 0.09 |
| | Lactose (%) | 4.53 |
| | Moisture 102°C (%) | 5.05 |
| | pH 5% Solution (pH units) | 6.57 |
| | Protein Kjeldahl (%) | 80.49 |

Reference Material: Whey Protein Concentrate - WPC80 (Rennet)

| | | |
|---|--------------------|-----------|
| Matrix: Whey Protein Concentrate | Product ID | 919-C-1 |
| | Expiry Date | 16 May 25 |
| | Sample Size | 80g |
| | Ash (%) | 2.89 |
| | Fat SBR (%) | 5.5 |
| | Lactose (%) | 5.44 |
| | Moisture 102°C (%) | 4.63 |

QC Material: Whey Protein Concentrate - WPC80 (Rennet)

| | | |
|---|------------------------------|-----------|
| Matrix: Whey Protein Concentrate | Product ID | 14712-QC |
| | Process Run | PR11529 |
| | Expiry Date | 16 May 25 |
| | Sample Size | 80g |
| | Ash (%) | 2.94 |
| | Fat SBR (%) | 5.6 |
| | Insolubility Index 24°C (mL) | 0.08 |
| | Lactose (%) | 5.10 |
| Moisture 102°C (%) | 4.64 | |
| pH 5% Solution (pH units) | 6.79 | |
| Protein Kjeldahl (%) | 78.33 | |