

## Reference Material and Inter-laboratory Quality Control Materials Product Summary

January 2025

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

<b>Matrix: Anhydrous Milk Fat</b>	<b>Product ID</b>	901-C-2
	<b>Expiry Date</b>	15 May 25
	<b>Sample Size</b>	100mL
	<b>Carotene (mg/kg)</b>	9.3
	<b>Free Fatty Acids (%)</b>	0.14
	<b>Peroxide Value (meqO2 /kg)</b>	0.07

**QC Material: Anhydrous Milk Fat - Anhydrous Milk Fat**

<b>Matrix: Anhydrous Milk Fat</b>	Product ID	14802-QC
	Process Run	PR11877
	Expiry Date	15 May 25
	Sample Size	100mL
	<b>Alkalinity (mg/kg)</b>	3
	<b>Carotene (mg/kg)</b>	9.2
	<b>Free Fatty Acids (%)</b>	0.14
	<b>Moisture KF (%)</b>	0.05
	<b>Peroxide Value (meqO2 /kg)</b>	0.06

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

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

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

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

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

<b>Matrix: Milk Powders for Bulk Density</b>	Product ID	15521-QC
	Process Run	PR11877
	Expiry Date	17 Jun 25
	Sample Size	160g
	<b>Bulk Density 100 Taps (g/ml)</b>	0.71

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

<b>Matrix: Milk Powders for Bulk Density</b>	Product ID	15519-QC
	Process Run	PR11877
	Expiry Date	17 Jun 25
	Sample Size	120g
	<b>Bulk Density 100 Taps (g/ml)</b>	0.57

**QC Material: Protein Powders for Bulk Density - Mineral Acid Casein (35 taps test only)**

<b>Matrix: Protein Powders for Bulk</b>	Product ID	14653-QC
	Process Run	PR11856
	Expiry Date	17 Jun 25
	Sample Size	170g
	<b>Bulk Density 35 Taps (g /ml)</b>	0.68

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

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

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

<b>Matrix: Protein Powders for Bulk</b>	Product ID	13668-QC
	Process Run	PR11856
	Expiry Date	26 May 25
	Sample Size	110g
	<b>Bulk Density 35 Taps (g /ml)</b>	0.46

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

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

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

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

**Reference Material: Butter - Salted Butter**

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

**QC Material: Butter - Salted Butter**

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

**QC Material: Butter - Unsalted Butter**

<b>Matrix: Butter</b>	Product ID	14634-QC
	Process Run	PR11877
	Expiry Date	11 May 25
	Sample Size	55g
	<b>Fat by Difference (%)</b>	82.96
	<b>Moisture Oven/Hot Plate (%)</b>	15.67
	<b>SNF (%)</b>	1.32

**QC Material: Butter for pH testing - Lactic Butter**

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

**QC Material: Casein - Lactic Acid Casein (30 Mesh)**

<b>Matrix: Casein</b>	Product ID	14654-QC
	Process Run	PR11856
	Expiry Date	17 Apr 26
	Sample Size	150g
	Ash (%)	1.68
	Fat SBR (%)	0.8
	Free Acidity (ml/g)	0.22
	Lactose (%)	0.06
	Part. Size Pass 1st Sieve (%)	99.9
	Part. Size Pass 2nd Sieve (%)	46.7
	pH (pH units)	3.9
	Protein Kjeldahl (%)	87.53

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

<b>Matrix: Casein</b>	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)**

<b>Matrix:</b> <b>Casein</b>	Product ID	13674-QC	14655-QC
	Process Run	PR11095	PR11856
	Expiry Date	9 Aug 25	25 Feb 26
	Sample Size	150g	150g
	<b>Ash (%)</b>	1.79	1.67
	<b>Fat SBR (%)</b>	0.5	0.5
	<b>Free Acidity (ml/g)</b>	0.08	0.08
	<b>Lactose (%)</b>	0.02	0.02
	<b>Moisture 102°C (%)</b>	8.92	9.74
	<b>Part. Size Pass 1st Sieve (%)</b>	99.8	99.5
	<b>Part. Size Pass 2nd Sieve (%)</b>	45.1	37.8
	<b>pH (pH units)</b>	4.3	4.4
	<b>Protein Kjeldahl (%)</b>	90.35	89.26

**QC Material: Caseinate - Calcium Caseinate**

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



**QC Material: Caseinate - Sodium Caseinate**

<b>Matrix: Caseinate</b>	Product ID	15532-QC
	Process Run	PR11856
	Expiry Date	5 Aug 25
	Sample Size	80g
	<b>Ash (%)</b>	3.69
	<b>Lactose (%)</b>	0.10
	<b>Moisture 102°C (%)</b>	4.49
	<b>pH 5% Solution (pH units)</b>	6.75
	<b>Protein Kjeldahl (%)</b>	91.93

**Reference Material: Cheese - Egmont Cheese**

<b>Matrix: Cheese</b>	Product ID	961-C-1
	Expiry Date	14 May 25
	Sample Size	75g
	<b>Calcium (mmol/kg)</b>	185
	<b>Fat SBR (%)</b>	32.33
	<b>Moisture 105°C (%)</b>	38.9
	<b>Protein (%)</b>	23.57
	<b>Salt (%)</b>	1.89

**QC Material: Cheese - Egmont Cheese**

<b>Matrix: Cheese</b>	Product ID	15534-QC
	Process Run	PR11877
	Expiry Date	14 May 25
	Sample Size	75g
	<b>Calcium (mmol/kg)</b>	187
	<b>Fat SBR (%)</b>	32.30
	<b>Moisture 105°C (%)</b>	38.8
	<b>pH (pH units)</b>	5.16
	<b>Protein (%)</b>	23.61
	<b>Salt (%)</b>	1.90

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

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

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

Matrix: Cheese	Product ID	15533-QC
	Process Run	PR11646
	Expiry Date	14 May 25
	Sample Size	75g
	Calcium (mmol/kg)	216
	Fat SBR (%)	26.19
	Moisture 105°C (%)	38.3
	pH (pH units)	5.55
	Protein (%)	29.16
	Salt (%)	2.19

**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

**QC Material: Dairy Powders with Metals - Infant Formula Base (Metals)**

Matrix: Dairy Powders with Metals	Product ID	15758-QC
	Process Run	PR11797
	Expiry Date	18 Oct 25
	Sample Size	15g
	Aluminium (mg/kg)	1.28
	Antimony (mg/kg)	0.040
	Arsenic (mg/kg)	0.221
	Cadmium (mg/kg)	0.013
	Chromium (mg/kg)	0.215
	Lead (mg/kg)	0.048
	Mercury (mg/kg)	0.045
	Nickel (mg/kg)	0.114

**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
	Process Run	PR10628
	Expiry Date	11 May 25
	Sample Size	30g
	<b>Calcium (mg/100g)</b>	314
	<b>Chloride (mg/100g)</b>	56
	<b>Copper (mg/kg)</b>	1.11
	<b>Iodine (µg/100gm)</b>	10
	<b>Iron (mg/kg)</b>	11.3
	<b>Magnesium (mg/100g)</b>	51.4
	<b>Phosphorus (mg/100g)</b>	447
	<b>Potassium (mg/100g)</b>	250
	<b>Sodium (mg/100g)</b>	1119
	<b>Zinc (mg/kg)</b>	3.4

**Reference Material: Powders for Micronutrients - Instant WMP**

<b>Matrix: Powders for Micronutrients</b>	<b>Product ID</b>	813-C-1	892-C-1	953-C-1
	<b>Expiry Date</b>	7 Apr 25	7 Apr 25	27 Mar 27
	<b>Sample Size</b>	30g	30g	30g
	<b>Calcium (mg/100g)</b>	765		774
	<b>Chloride (mg/100g)</b>	572	555	
	<b>Copper (mg/kg)</b>	0.15		0.13
	<b>Iron (mg/kg)</b>	108.9		1.7
	<b>Magnesium (mg/100g)</b>		74.6	73.1
	<b>Manganese (µg/100g)</b>		28	24
	<b>Phosphorus (mg/100g)</b>	590	586	557
	<b>Potassium (mg/100g)</b>	806	801	780
	<b>Sodium (mg/100g)</b>	225	220	236
	<b>Zinc (mg/kg)</b>		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	893-C-1	954-C-1
	Expiry Date	15 Mar 26	27 Jan 27
	Sample Size	30g	30g
	Calcium (mg/100g)	1084	1089
	Chloride (mg/100g)	761	778
	Copper (mg/kg)	0.19	0.24
	Magnesium (mg/100g)	104.2	102.0
	Manganese (µg/100g)	23	26
	Phosphorus (mg/100g)	808	853
	Potassium (mg/100g)	1190	1338
	Sodium (mg/100g)		283
	Zinc (mg/kg)	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
	<b>Calcium (mg/100g)</b>	1200	1093	1088
	<b>Chloride (mg/100g)</b>	1006	758	769
	<b>Copper (mg/kg)</b>	0.45	0.19	0.24
	<b>Iodine (µg/100gm)</b>		61	
	<b>Iron (mg/kg)</b>	1.5	2.0	1.8
	<b>Magnesium (mg/100g)</b>	112.6	105.5	103.6
	<b>Manganese (µg/100g)</b>	30	25	26
	<b>Phosphorus (mg/100g)</b>	1018	803	854
	<b>Potassium (mg/100g)</b>	1790	1202	1336
	<b>Sodium (mg/100g)</b>	346	297	283
	<b>Zinc (mg/kg)</b>	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
	<b>Fat RG (%)</b>	8.48
	<b>Insolubility Index 24°C (mL)</b>	0.08
	<b>Moisture 102°C (%)</b>	3.79
	<b>Moisture Reference Dryer (%)</b>	3.82
	<b>Protein Kjeldahl (%)</b>	30.28
	<b>Titrateable Acidity (%)</b>	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**

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

**Reference Material: Milk Powder - Whole Milk Powder**

<b>Matrix: Milk Powder</b>	Product ID	884-C-1	883-C-1	940-C-1	950-C-1	960-C-1
	Expiry Date	27 Feb 25	9 Mar 25	19 Sep 25	19 Sep 25	4 Feb 26
	Sample Size	80g	80g	80g	80g	80g
	<b>Ash (%)</b>	4.93	4.49	4.98	5.68	4.94
	<b>Fat RG (%)</b>	28.00	26.40	26.33	28.17	28.25
	<b>Free Fat - in powder (%)</b>	1.70	0.45			
	<b>Moisture 102°C (%)</b>	2.80	2.93	2.40	3.07	3.06
	<b>Moisture KF (%)</b>		3.28			
	<b>pH (pH units)</b>	6.74	6.77	6.78	6.70	6.76
	<b>Protein Kjeldahl (%)</b>	23.54	24.53	24.16	23.61	23.58
	<b>WPNI (mg/g SNF)</b>	3.1	3.8	3.8	0.5	1.9

**QC Material: Milk Powder - Whole Milk Powder**

Matrix: Milk Powder	Product ID	14704-QC	14705-QC	14709-QC	14707-QC	14708-QC	15564-QC
	Process Run	PR11253	PR11253	PR11795	PR11795	PR11646	PR11877
	Expiry Date	27 Feb 25	9 Mar 25	15 Apr 25	19 Sep 25	19 Sep 25	4 Feb 26
	Sample Size	80g	80g	80g	80g	80g	80g
	Ash (%)	4.93	4.50	4.27	5.67	4.97	4.94
	Fat RG (%)		26.43	28.04	28.21	26.35	28.31
	Free Fat - in powder (%)	1.70	0.47	1.60	1.54	0.75	1.30
	Insolubility Index 24°C (mL)	0.15	0.10	0.12	0.21	0.50	0.16
	Moisture 102°C (%)		2.91	2.97	3.07	2.39	3.04
	Moisture KF (%)	3.17	3.30	3.39	3.50		
	Moisture Reference Dryer (%)	2.88	3.00	3.14	3.18	2.49	3.20
	pH (pH units)	6.74	6.76	6.80	6.71	6.77	6.75
	Protein Combustion (%)			23.24	23.62		
	Protein Kjeldahl (%)		24.53	23.24	23.64	24.17	23.54
	Titrateable Acidity (%)	0.085	0.078	0.072	0.103	0.088	0.091
	WPNI (mg/g SNF)	3.0	3.6	2.3	0.5	3.6	1.9

**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**

<b>Matrix: Milk Protein Concentrate</b>	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**

<b>Matrix: Milk Protein Concentrate</b>	Product ID	947-C-1
	Expiry Date	21 Nov 25
	Sample Size	80g
	Moisture 102°C (%)	4.75
	pH 5% Solution (pH units)	6.96

**QC Material: Milk Protein Concentrate - MPC56**

<b>Matrix: Milk Protein Concentrate</b>	Product ID	15557-QC
	Process Run	PR11795
	Expiry Date	21 Nov 25
	Sample Size	80g
	Ash (%)	7.43
	Fat RG (%)	0.87
	Insolubility Index 40°C (mL)	0.09
	Moisture 102°C (%)	4.74
	pH 5% Solution (pH units)	6.96
Protein Kjeldahl (%)	56.25	
Tit Acidity 5% Solution (%m/m)	1.035	
WPNI (mg/g)	9.9	

**QC Material: Milk Protein Concentrate - MPC70**

<b>Matrix: Milk Protein Concentrate</b>	Product ID	15556-QC
	Process Run	PR11877
	Expiry Date	12 Jan 26
	Sample Size	80g
	Ash (%)	7.12
	Fat RG (%)	1.20
	Insolubility Index 40°C (mL)	0.11
	Moisture 102°C (%)	4.87
	pH 5% Solution (pH units)	7.03
Protein Kjeldahl (%)	69.42	
Tit Acidity 5% Solution (%m/m)	1.071	
WPNI (mg/g)	11.2	

**Reference Material: Milk Protein Concentrate - MPC80**

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

**QC Material: Milk Protein Concentrate - MPC80**

<b>Matrix: Milk Protein Concentrate</b>	<b>Product ID</b>	14689-QC
	<b>Process Run</b>	PR11455
	<b>Expiry Date</b>	13 Feb 25
	<b>Sample Size</b>	80g
	<b>Ash (%)</b>	6.83
	<b>Fat SBR (%)</b>	1.17
	<b>Lactose (%)</b>	7.98
	<b>Moisture 102°C (%)</b>	6.18
	<b>pH 5% Solution (pH units)</b>	6.99
	<b>Protein Kjeldahl (%)</b>	77.57
	<b>WPNI (mg/g)</b>	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	15560-QC
	Process Run	PR11455	PR11795
	Expiry Date	5 Mar 25	19 Sep 25
	Sample Size	80g	80g
Ash (%)	6.71	7.13	
Fat SBR (%)	1.20	1.19	
Lactose (%)	4.61	5.31	
Moisture 102°C (%)	5.97	5.86	
pH 5% Solution (pH units)	7.01	7.02	
Protein Kjeldahl (%)	81.60	80.53	
WPNI (mg/g)	13.8	13.9	

**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	PR11646	PR11646
	Expiry Date	27 Aug 25	27 Aug 25
	Sample Size	30g	30g
	Vitamin A (µg/100gm)	1068	999
	Vitamin C (mg/100g)	10.6	15.1
	Vitamin D (µg/100gm)	7.8	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)**

<b>Matrix: Whey Protein Concentrate</b>	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	

**QC Material: Whey Protein Concentrate - WPC80 (Mineral Acid)**

<b>Matrix: Whey Protein Concentrate</b>	Product ID	15568-QC
	Process Run	PR11856
	Expiry Date	24 Dec 25
	Sample Size	80g
	Ash (%)	4.67
	Fat SBR (%)	5.4
	Insolubility Index 24°C (mL)	0.08
	Lactose (%)	4.93
Moisture 102°C (%)	5.85	
pH 5% Solution (pH units)	6.73	
Protein Kjeldahl (%)	77.08	

**Reference Material: Whey Protein Concentrate - WPC80 (Rennet)**

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

**QC Material: Whey Protein Concentrate - WPC80 (Rennet)**

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

