

VeriCal[®] Raw Milk - Data Summary Sheet

CODE 2310 WITH WHITE CAPS AND GREEN LABELS

Issue Date: 25 August 2023

Expiry Date: 23 October 2023

Version: 1

Table 1. Fat, Lactose, Crude Protein, True Protein, Solids Non Fat, Total Solids & Density

(Expressed in mass / volume terms)

Sample ID	Composition	Assigned Values +/- Uncertainty of the Mean ¹						
		Fat (g/100ml)	Lactose Monohydrate (g/100ml)	Crude Protein (g/100ml)	True Protein (g/100ml)	Solids Non Fat (g/100ml)	Total Solids (g/100ml)	Density (g/ml)
1	Skim milk and water	2.11 ± 0.03	4.07 ± 0.03	3.05 ± 0.00	2.88 ± 0.01	7.64 ± 0.05	9.76 ± 0.02	1.0247 ± 0.0001
2	Whole milk, skim milk and water	3.04 ± 0.01	4.58 ± 0.07	3.43 ± 0.01	3.24 ± 0.01	8.65 ± 0.03	11.67 ± 0.04	1.0275 ± 0.0000
3	Whole milk only	3.92 ± 0.03	4.92 ± 0.05	3.68 ± 0.01	3.48 ± 0.02	9.29 ± 0.04	13.21 ± 0.04	1.0292 ± 0.0001
4	Cream, whole milk and skim milk	4.65 ± 0.03	4.86 ± 0.07	3.80 ± 0.01	3.59 ± 0.01	9.26 ± 0.06	13.92 ± 0.07	1.0286 ± 0.0000
5	Cream, whole milk and skim milk	5.31 ± 0.03	4.77 ± 0.03	3.90 ± 0.01	3.70 ± 0.02	9.32 ± 0.07	14.66 ± 0.05	1.0280 ± 0.0001
6	Cream, whole milk and skim milk	5.89 ± 0.02	4.69 ± 0.05	4.22 ± 0.01	4.02 ± 0.02	9.60 ± 0.04	15.49 ± 0.03	1.0282 ± 0.0002
7	Cream, whole milk, skim milk and water	6.42 ± 0.02	4.60 ± 0.07	4.53 ± 0.01	4.34 ± 0.01	9.79 ± 0.07	16.20 ± 0.08	1.0284 ± 0.0002
Methods		Gravimetric	HPLC	Kjeldahl	Kjeldahl	Gravimetric	Gravimetric	Gravimetric

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Table 2. Fat, Lactose, Crude Protein, True Protein, Solids Non Fat, Total Solids & Density

(Expressed in mass / mass terms [excl Density])

Sample ID	Composition	Assigned Values +/- Uncertainty of the Mean ¹						
		Fat (g/100g)	Lactose Monohydrate (g/100g)	Crude Protein (g/100g)	True Protein (g/100g)	Solids Non Fat (g/100g)	Total Solids (g/100g)	Density (g/ml)
1	Skim milk and water	2.06 ± 0.03	3.98 ± 0.03	2.98 ± 0.00	2.81 ± 0.01	7.45 ± 0.05	9.53 ± 0.02	1.0247 ± 0.0001
2	Whole milk, skim milk and water	2.96 ± 0.01	4.45 ± 0.07	3.34 ± 0.01	3.15 ± 0.01	8.41 ± 0.02	11.35 ± 0.04	1.0275 ± 0.0000
3	Whole milk only	3.81 ± 0.03	4.78 ± 0.06	3.58 ± 0.01	3.38 ± 0.02	9.02 ± 0.04	12.84 ± 0.04	1.0292 ± 0.0001
4	Cream, whole milk and skim milk	4.52 ± 0.03	4.72 ± 0.07	3.69 ± 0.01	3.49 ± 0.01	9.00 ± 0.06	13.53 ± 0.07	1.0286 ± 0.0000
5	Cream, whole milk and skim milk	5.17 ± 0.03	4.64 ± 0.03	3.79 ± 0.01	3.60 ± 0.02	9.06 ± 0.07	14.26 ± 0.05	1.0280 ± 0.0001
6	Cream, whole milk and skim milk	5.73 ± 0.02	4.56 ± 0.05	4.10 ± 0.01	3.91 ± 0.01	9.33 ± 0.03	15.07 ± 0.03	1.0282 ± 0.0002
7	Cream, whole milk, skim milk and water	6.24 ± 0.02	4.48 ± 0.07	4.41 ± 0.01	4.22 ± 0.01	9.52 ± 0.07	15.76 ± 0.08	1.0284 ± 0.0002
Methods		Gravimetric	HPLC	Kjeldahl	Kjeldahl	Gravimetric	Gravimetric	Gravimetric

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¹Uncertainty of Mean is an expanded standard error of the mean (SEM) with a level of confidence of 95%. The coverage factor is the critical value of Student's t distribution with n - 1 degrees of freedom. This uncertainty may only represent the measurement reproducibility of the data used. It does not include all known associated uncertainties and does not suggest that all methods used are statistically equivalent.

Intended Use: For the confirmation of FTIR instrument calibration used to determine attributes of Raw Bovine Milk.

Description: 50ml+ coloured and preserved samples packaged in amber plastic bottles

Homogeneity: These materials have been assessed as homogeneous

Stability: An expiry period consistent with the shelf life of the product and/or estimated from stability studies has been applied

Storage: Store samples refrigerated (approximately 4°C). Once opened, samples will be unstable due to oxidation and evaporation.

Assigned Values: The Mean is the simple mean of n values excluding outliers. The n values range from 6 - 8 for Fat, Crude Protein, True Protein, Total Solids and Solids Non Fat, and between 3 - 4 for Lactose and Density.

Quality Statement: The values shown have been generated using results from independent testing laboratories accredited under the General requirements for the competence of testing and calibration laboratories to ISO/IEC 17025. These procedures are based on ISO 17034, and ISO Guides 31 and 35, which relate to the production, certification and quality system requirements of Reference Materials.