Reference Material - Data Summary Sheet

GP Batch: 1080-C-1

Product Type: Stg 2 (FO) COW Wet-Blend

Issue Date: 29 October 2026

Expiry Date: 24 March 2028

Test Name	n Labs	n Values	Mean	Uncertainty [1] of Mean	k	Methods
Ascorbic Acid Vit C (mg/kg)	7	13	976	+/- 30	2.18	AOAC 2012.22, AOAC 967.22, AOAC 985.33, AOAC 985.33 (Mod), Food Chemistry 94 626-631 (LC-DAD), GB500 9.86 (Method I), NZTM3.17.3
Biotin (mg/kg)	6	14	0.428	+/- 0.025	2.16	AOAC 2015.14 (Mod), AOAC 2016.02, GB5009.259, In House (LC-MS/MS), J AOAC vol 93 no.5 LC-MS, NZTM3.17.56
Cholecalciferol Vit D3 (mg/kg)	6	17	0.107	+/- 0.002	2.12	AOAC 2002.05, AOAC 2016.05, COST 91, EN 12821 (LC-DAD), In House (HPLC) , ISO 20636
Choline (mg/kg)	7	17	1212	+/- 34	2.12	AOAC 2015.10, AOAC 2015.10 (Mod), AOAC 999.14, AOAC Vol 91 1 (LC-MS/M S), GB5413.20 (Method I), GB5413.20 (M ethod III)
Cyanocobalamin Vit B12 (mg/kg)	5	10	0.0372	+/- 0.0043	2.26	AOAC 2014.02, AOAC 2014.02 (Mod) HPLC-UV, AOAC 952.20; 960.46 (Mod); 2011.10 / M of A for IF Section C-2, JAOAC Vol 91 (Mod), JAOAC Vol 91 No 4 (LC-UV/DAD)
dl-a-Tocopherol eqVit E(mg/kg)	9	23	187	+/- 9	2.07	AOAC 2011.15 (Mod), AOAC 2012.10, AOAC 992.03; 992.06 (Mod), EN 12822, GB5009.82, GB5009.82 (Method I), In House (HPLC), ISO 20633, NZTM3.17.9
Pantothenic Acid VitB5 (mg/kg)	7	20	40.8	+/- 0.8	2.09	AOAC 2012.16, AOAC 2015.14 (Mod), AOAC 992.07 / 960.46 / 945.74 (Mod), Food Chemistry (69) 201-8, GB5009.210 (Method I), GB5009.210 (Method II), NZTM3.17.55 (Mod)
Phylloquinone Vit K1 (mg/kg)	7	13	0.711	+/- 0.025	2.18	AOAC 2015.09, AOAC 992.27; 999.15 (M od), AOAC 999.15, DIN EN 14148 (Mod) HPLC-FLD, GB5009.158 (Method I), GB50 09.158 (Method II), NZTM3.17.13
Pyridoxine Vit B6 (mg/kg)	8	22	5.76	+/- 0.24	2.08	AOAC 2015.14 (Mod), EN 14164, GB500 9.154 (Method I), GB5009.154 (Method III) , In House (HPLC), ISO 21470, JAOAC Vol 85 No 4 945-951, NZTM3.17.33, Royal ACL Vol 2
Thiamine Vit B1 (mg/kg)	8	22	9.02	+/- 0.28	2.08	AOAC 2015.14 (Mod), EN 14122 Mod, GB 5009.84 (Method I), In House (HPLC), ISO 21470, J Chrom 301 p470-6, JAOAC Vol 85 No 4 945-951, NZTM3.17.55 (Mod), Royal ACL Vol 2

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Vitamin A (as Retinol) (mg/kg)	8	19	7.57	+/- 0.29	2.10	AOAC 2012.10, AOAC 992.03; 992.06 (Mod), GB5009.82, GB5009.82 (Method I), In House (HPLC), ISO 20633

[1] *Uncertainty of Mean is an expanded standard error of the mean (SEM) with a level of confidence of 95%. The coverage factor (k) 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 verification of analytical methods used to determine attributes of Stg 2 (FO) COW Wet-Blend

Description: 150 g+ packed in a white recyclable container

Homogeneity: This reference material has been assessed as homogeneous.

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

Storage: Store samples frozen. Once opened, samples will be unstable due to moisture absorption.

Instructions for Use: Sample test portion size must be as stated in the method used in your laboratory; modification could invalidate the Reference values. The reference values provided for this product are only valid for a single use.

Reference Values: The Mean is the simple mean excluding outliers; *n labs* is the number of laboratories who contributed results, and *n values* is the number of results used to calculate the mean. The uncertainty of the mean is the range within which the true mean of the population can be expected to lie with 95% confidence. This value is derived in accordance with the procedures described in ISO 33405:2024 "Reference materials - Approaches for characterization and assessment of homogeneity and stability".

Quality Statement: The values shown have been generated from data submitted in an inter-laboratory comparison programme (ILCP). The ILCP and reference material production are accredited to ISO/IEC 17043:2023 and ISO 17034:2016 respectively. Generation of this reference material also includes the requirements of ISO 33401 and 33405, which relate to production, characterisation and final product presentation.

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