



**AAFCO**  
Association of American Feed Control Officials



**Animal Feed Scheme**  
**Deer Feed, Medicated**  
**Test Material Code # 202331**

**Method Summary Report**  
(Precision Report Follows)

**# Labs Reporting: 171**  
**# Methods Reported: 398**  
**Issue Date : 12/31/2023**

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO #fp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (Rob R-bar)	Thompson Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	5	5	1.400	0.9095	1.400	0.9095	0.4068	64.97%	0.1200	3.80%
000.99	Urea, Miscellaneous (%)	1	1	1.505							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	47	<b>46</b>	9.218	0.4847	<b>9.244</b>	0.2308	0.0425	2.50%	0.0642	2.86%
001.99	Loss on Drying, Miscellaneous (%)	20	<b>19</b>	9.241	0.5691	<b>9.280</b>	0.5281	0.1514	5.69%	0.1103	2.86%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	4	4	9.304	0.1015	9.304	0.1015	0.0507	1.09%	0.0119	2.86%
001.03	Loss on Drying, Low temp. methods (%)	2	2	9.030	0.2970						
001.05	Loss on Drying, LECO (%)	1	1	9.189							
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	1	1	9.650							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	114	<b>113</b>	22.58	0.4015	<b>22.57</b>	0.3152	0.0371	1.40%	0.2100	2.10%
002.05	Protein, Crude, Copper, Boric Acid (%)	29	<b>28</b>	22.20	0.2810	<b>22.21</b>	0.2149	0.0508	0.97%	0.0988	2.12%
002.01	Protein, Crude, Auto Kjeh-Foss (%)	17	<b>16</b>	22.24	0.2867	<b>22.24</b>	0.3187	0.0996	1.43%	0.1533	2.12%
002.11	Protein, Crude, NIR (%)	4	4	22.84	1.421	22.84	1.421	0.7106	6.22%	0.1100	2.09%
002.00	Protein, Crude, Crude (%)	3	3	20.68	3.553	20.68	3.553	2.051	17.19%	0.1100	2.20%
002.08	Protein, Crude, Cu/Ti (%)	2	2	22.29	0.5956						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	1	1	22.37							
002.03	Protein, Crude, Hach Method (%)	1	1	20.52							
002.04	Protein, Crude, Copper Catalyst (%)	1	1	22.89							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	22.18							
002.99	Protein, Crude, Miscellaneous (%)	1	1	14.77							
003.14	Fat, Crude, Ankom (%)	58	<b>57</b>	3.569	0.3807	<b>3.608</b>	0.2146	0.0355	5.95%	0.1109	3.30%
003.10	Fat, Crude, Randall, Pet Ether (%)	31	<b>31</b>	3.517	0.2346	<b>3.517</b>	0.2439	0.0548	6.93%	0.1014	3.31%
003.06	Fat, Crude, Pet Ether (%)	17	<b>17</b>	3.644	0.2388	<b>3.640</b>	0.2623	0.0795	7.20%	0.1297	3.29%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	10	<b>10</b>	3.719	0.1566	<b>3.717</b>	0.1481	0.0585	3.98%	0.1610	3.28%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	9	<b>8</b>	3.778	0.2408	<b>3.778</b>	0.2731	0.1207	7.23%	0.0957	3.27%
003.11	Fat, Crude, NIR (%)	4	4	4.075	0.8827	4.075	0.8827	0.4414	21.66%	0.0267	3.24%
003.12	Fat, Crude, Hexane Ext (%)	4	4	3.784	0.5341	3.784	0.5341	0.2671	14.12%	0.0775	3.27%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	5	4	3.660	0.1589	3.660	0.1589	0.0918	4.34%	0.0246	3.29%
003.99	Fat, Crude, Miscellaneous (%)	5	4	4.400	4.067	4.400	4.067	2.034	92.44%	0.3650	3.20%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	3	3	3.682	0.3642	3.682	0.3642	0.2103	9.89%	0.1992	3.29%

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004.07	Fiber, Crude, ANKOM (%)	84	81	11.32	0.8835	11.28	0.7569	0.1051	6.71%	0.2074	2.78%
004.06	Fiber, Crude, Fibertec (%)	19	18	10.83	0.8156	10.83	0.5249	0.1546	4.85%	0.1907	2.79%
004.00	Fiber, Crude, Asbestos Free (%)	11	11	11.35	0.6909	11.35	0.7809	0.2943	6.88%	0.3500	2.77%
004.03	Fiber, Crude, Fritted Glass (%)	5	4	11.44	0.9910	11.44	0.9910	0.4955	8.66%	0.4633	2.77%
004.11	Fiber, Crude, NIR (%)	3	3	11.51	0.5052	11.51	0.5052	0.2917	4.39%	0.1375	2.77%
004.99	Fiber, Crude, Miscellaneous (%)	3	3	11.32	0.5066	11.32	0.5066	0.3582	4.47%	1.067	2.78%
005.00	Ash, 2h @ 600°C (%)	93	91	9.313	1.075	9.243	0.3667	0.0481	3.97%	0.1095	2.86%
005.05	Ash, 3h @ 550°C (%)	28	28	9.556	0.3268	9.566	0.2671	0.0631	2.79%	0.1028	2.85%
005.99	Ash, Miscellaneous (%)	13	12	9.436	0.3210	9.463	0.2453	0.0885	2.59%	0.1043	2.85%
005.11	Ash, NIR (%)	4	4	8.558	2.197	8.558	2.197	1.098	25.67%	0.0583	2.90%
005.02	Ash, LECO (%)	1	1	9.874							
005.03	Ash, Microwave furnace (%)	1	1	8.900							
006.00	Total Sugars, As sucrose (%)	2	2	4.327	0.9284						
006.99	Total Sugars, Miscellaneous (%)	2	2	4.955	1.054						
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	48	47	15.24	2.253	15.54	1.192	0.2173	7.67%	0.3122	2.54%
008.02	Fiber, Acid Detergent, Crucible (%)	13	13	15.68	0.7127	15.68	0.7035	0.2439	4.49%	0.2984	2.53%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	3	3	14.97	0.4068	14.97	0.4068	0.2349	2.72%	0.3250	2.58%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	45	43	31.07	3.724	31.54	1.223	0.2331	3.88%	0.2965	1.78%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	14	32.75	1.749	32.75	1.984	0.6627	6.06%	0.4137	1.75%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	3	3	31.24	3.200	31.24	3.200	1.847	10.24%	0.2733	1.79%
010.99	Moisture, Miscellaneous (%)	16	16	9.180	0.4043	9.177	0.4527	0.1415	4.93%	0.1151	2.87%
010.03	Moisture, Karl-Fischer (%)	2	2	9.285	0.1061						
010.11	Moisture, NIR (%)	2	2	8.843	0.0035						
011.01	Loss on Drying, HT, 135°C 2hr (%)	70	69	10.12	0.6484	10.18	0.3677	0.0553	3.61%	0.1143	2.82%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	3	3	10.89	1.732	10.89	1.732	1.000	15.91%	0.1300	2.79%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	4	3	9.875	0.6330	9.875	0.6330	0.4476	6.41%	0.3837	2.83%
012.00	Starch, Polarimetric (Ewers) (%)	16	14	14.07	0.4665	14.07	0.5290	0.1767	3.76%	0.2457	2.67%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	14	14	12.86	5.065	11.82	2.519	0.8416	21.31%	0.3717	2.76%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	7	7	12.24	0.8364	12.24	0.9485	0.4481	7.75%	0.4568	2.74%
012.11	Starch, NIR (%)	4	4	11.94	4.552	11.94	4.552	2.276	38.14%	0.2000	2.75%
012.99	Starch, Miscellaneous (%)	3	3	19.43	12.47	19.43	12.47	8.818	64.19%	0.2177	2.27%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	10.92	0.1786						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	11.19							
013.00	Fat, Pretreat, Acid hydrolysis (%)	20	20	4.534	0.5900	4.557	0.6166	0.1724	13.53%	0.1913	3.18%
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	16	15	5.104	0.4379	5.106	0.4419	0.1426	8.66%	0.0819	3.13%
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	8	8	4.915	0.9063	4.915	1.028	0.4542	20.91%	0.2176	3.15%
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	7	7	4.280	0.3205	4.280	0.3635	0.1717	8.49%	0.1015	3.21%
013.08	Fat, Pretreat, Roese-Gottlieb Modified, Alkaline Hydrolysis (%)	1	1	2.300							
015.43	Aluminum, ICP, Microwave (ppm)	8	8	148.5	26.09	151.8	21.31	9.419	14.04%	3.759	7.51%
015.41	Aluminum, ICP, Dry ash (ppm)	4	3	128.6	12.70	128.6	12.70	7.331	9.87%	5.935	7.70%

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015.42	Aluminum, ICP, Open vessel (ppm)	2	2	97.70	3.815						
015.53	Aluminum, ICP-MS, Microwave (ppm)	2	2	145.6	5.852						
015.99	Aluminum, Miscellaneous (ppm)	1	1	110.0							
017.43	Boron, ICP, Microwave (ppm)	8	6	8.243	0.8675	8.243	0.9838	0.5020	11.93%	0.2438	11.65%
017.41	Boron, ICP, Dry ash (ppm)	5	5	8.092	0.7441	8.092	0.7441	0.3328	9.20%	0.4476	11.68%
017.42	Boron, ICP, Open vessel (ppm)	4	4	8.868	1.450	8.868	1.450	0.7249	16.35%	0.6823	11.52%
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	8.091							
017.99	Boron, Miscellaneous (ppm)	1	1	8.535							
019.43	Calcium, ICP, Microwave (%)	37	36	1.731	0.0905	1.742	0.0716	0.0149	4.11%	0.0458	3.68%
019.41	Calcium, ICP, Dry ash (%)	21	21	1.702	0.0852	1.702	0.0805	0.0220	4.73%	0.0488	3.69%
019.42	Calcium, ICP, Open vessel (%)	20	20	1.755	0.1494	1.746	0.1458	0.0407	8.35%	0.0706	3.68%
019.31	Calcium, AAS, Dry ash (%)	17	16	1.666	0.1011	1.666	0.1143	0.0357	6.86%	0.0229	3.70%
019.08	Calcium, EDTA (%)	12	12	1.733	0.0955	1.732	0.1042	0.0376	6.02%	0.0268	3.68%
019.00	Calcium, Ox-Mn04 Vol. (%)	7	7	1.689	0.0723	1.689	0.0820	0.0387	4.85%	0.0503	3.70%
019.99	Calcium, Miscellaneous (%)	6	6	1.741	0.1799	1.741	0.2040	0.1041	11.72%	0.0783	3.68%
019.44	Calcium, ICP, Dry ash (%)	2	2	1.765	0.0147						
019.53	Calcium, ICP-MS, Microwave (%)	2	2	1.734	0.0019						
019.02	Calcium, Hach Method (%)	1	1	1.715							
019.09	Calcium, Ion-selective electrode (%)	1	1	1.534							
019.32	Calcium, AAS, Open vessel (%)	1	1	1.715							
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	1.540							
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	1.817							
021.43	Cobalt, ICP, Microwave (ppm)	8	8	3.406	0.3937	3.432	0.3842	0.1698	11.19%	0.0894	13.29%
021.41	Cobalt, ICP, Dry ash (ppm)	3	3	3.177	0.2561	3.177	0.2561	0.1478	8.06%	0.1028	13.44%
021.31	Cobalt, AAS, Dry ash (ppm)	2	2	3.302	0.9160						
021.42	Cobalt, ICP, Open vessel (ppm)	2	2	3.090	0.7142						
021.52	Cobalt, ICP-MS, Open vessel (ppm)	2	2	2.700	0.0919						
021.53	Cobalt, ICP-MS, Microwave (ppm)	2	2	3.604	0.3949						
021.00	Cobalt, Color (ppm)	1	1	3.340							
021.99	Cobalt, Miscellaneous (ppm)	1	1	3.200							
022.43	Copper, ICP, Microwave (ppm)	33	33	96.62	9.785	95.68	8.109	1.765	8.48%	4.052	8.05%
022.42	Copper, ICP, Open vessel (ppm)	22	21	96.40	6.795	96.55	7.362	2.008	7.63%	4.421	8.04%
022.41	Copper, ICP, Dry ash (ppm)	16	16	82.22	9.987	82.52	9.839	3.075	11.92%	3.690	8.23%
022.31	Copper, AAS, Dry ash (ppm)	11	11	83.84	6.762	83.84	7.668	2.890	9.15%	2.419	8.21%
022.44	Copper, ICP, Dry ash (ppm)	3	3	87.78	5.764	87.78	5.764	3.328	6.57%	1.964	8.16%
022.99	Copper, Miscellaneous (ppm)	3	3	99.00	8.411	99.00	8.411	4.856	8.50%	4.667	8.01%
022.53	Copper, ICP-MS, Microwave (ppm)	2	2	91.21	3.076						
022.32	Copper, AAS, Open vessel (ppm)	1	1	90.00							
022.33	Copper, AAS, Microwave (ppm)	1	1	81.70							
022.35	Copper, AAS, Dry ash (ppm)	1	1	66.53							

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022.52	Copper, ICP-MS, Open vessel (ppm)	1	1	99.67							
024.52	Iodine, ICP-MS, Open vessel (ppm)	1	1	1.238							
025.43	Iron, ICP, Microwave (ppm)	32	31	302.0	25.31	301.5	21.48	4.823	7.13%	7.397	6.77%
025.41	Iron, ICP, Dry ash (ppm)	19	19	293.4	17.19	293.8	11.36	3.258	3.87%	8.962	6.80%
025.42	Iron, ICP, Open vessel (ppm)	20	19	293.3	27.91	289.0	20.44	5.862	7.07%	10.24	6.82%
025.31	Iron, AAS, Dry ash (ppm)	12	11	299.2	26.35	301.5	22.81	8.598	7.57%	5.574	6.77%
025.99	Iron, Miscellaneous (ppm)	3	3	286.7	20.50	286.7	20.50	11.84	7.15%	4.000	6.83%
025.53	Iron, ICP-MS, Microwave (ppm)	2	2	304.8	16.62						
025.33	Iron, AAS, Microwave (ppm)	1	1	277.8							
027.43	Magnesium, ICP, Microwave (%)	32	32	0.3964	0.0264	0.3986	0.0249	0.0055	6.26%	0.0116	4.59%
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.3949	0.0260	0.3951	0.0271	0.0076	6.87%	0.0142	4.60%
027.41	Magnesium, ICP, Dry ash (%)	18	17	0.3940	0.0173	0.3936	0.0187	0.0057	4.75%	0.0143	4.60%
027.31	Magnesium, AAS, Dry ash (%)	10	9	0.3902	0.0192	0.3902	0.0212	0.0088	5.43%	0.0062	4.61%
027.99	Magnesium, Miscellaneous (%)	4	3	0.3967	0.0058	0.3967	0.0058				4.60%
027.44	Magnesium, ICP, Dry ash (%)	2	2	0.4088	0.0094						
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.3878	0.0032						
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.3750							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.4020							
027.51	Magnesium, ICP-MS, Dry ash (%)	1	1	0.3650							
027.52	Magnesium, ICP-MS, Open vessel (%)	1	1	0.4036							
028.43	Manganese, ICP, Microwave (ppm)	30	29	398.7	29.01	399.2	29.25	6.790	7.33%	11.12	6.49%
028.42	Manganese, ICP, Open vessel (ppm)	22	21	396.6	27.71	397.2	26.44	7.213	6.66%	10.86	6.50%
028.41	Manganese, ICP, Dry ash (ppm)	16	15	369.6	33.68	377.4	16.89	5.450	4.47%	10.84	6.55%
028.31	Manganese, AAS, Dry ash (ppm)	10	10	366.5	87.79	390.1	20.28	8.018	5.20%	7.005	6.52%
028.44	Manganese, ICP, Dry ash (ppm)	3	3	370.7	20.47	370.7	20.47	11.82	5.52%	10.70	6.57%
028.53	Manganese, ICP-MS, Microwave (ppm)	3	3	410.1	30.48	410.1	30.48	17.59	7.43%	8.729	6.47%
028.99	Manganese, Miscellaneous (ppm)	3	3	391.2	25.11	391.2	25.11	14.49	6.42%	9.000	6.51%
028.32	Manganese, AAS, Open vessel (ppm)	1	1	401.0							
028.33	Manganese, AAS, Microwave (ppm)	1	1	391.0							
028.52	Manganese, ICP-MS, Open vessel (ppm)	1	1	397.9							
030.01	Nitrate, Ion-selective electrode (%)	1	1	0.0008							
031.01	Phosphorus, Photometric (%)	36	34	0.9899	0.0313	0.9907	0.0290	0.0062	2.92%	0.0116	4.01%
031.43	Phosphorus, ICP, Microwave (%)	35	34	1.006	0.0532	1.010	0.0461	0.0099	4.56%	0.0205	3.99%
031.41	Phosphorus, ICP, Dry ash (%)	20	20	0.9973	0.0431	0.9978	0.0476	0.0133	4.77%	0.0204	4.00%
031.42	Phosphorus, ICP, Open vessel (%)	20	19	0.9799	0.0828	0.9818	0.0870	0.0250	8.86%	0.0247	4.01%
031.99	Phosphorus, Miscellaneous (%)	6	6	0.9629	0.0596	0.9629	0.0676	0.0345	7.02%	0.0113	4.02%
031.44	Phosphorus, ICP, Dry ash (%)	3	3	0.9891	0.0420	0.9891	0.0420	0.0243	4.25%	0.0199	4.01%
031.03	Phosphorus, Autoanalyzer (%)	2	2	0.9922	0.0040						
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.9963	0.0477						
031.06	Phosphorus, Hach Method (%)	1	1	0.8600							

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031.51	Phosphorus, ICP-MS, Dry ash (%)	1	1	0.9550							
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.9958							
032.43	Potassium, ICP, Microwave (%)	34	32	0.9884	0.0456	<b>0.9934</b>	0.0339	0.0075	3.41%	0.0191	4.00%
032.41	Potassium, ICP, Dry ash (%)	19	19	0.9505	0.0623	<b>0.9532</b>	0.0640	0.0183	6.71%	0.0272	4.03%
032.42	Potassium, ICP, Open vessel (%)	19	19	1.024	0.0733	<b>1.023</b>	0.0806	0.0231	7.88%	0.0271	3.99%
032.31	Potassium, AAS, Dry ash (%)	8	7	0.9144	0.0673	<b>0.9207</b>	0.0611	0.0289	6.63%	0.0133	4.05%
032.99	Potassium, Miscellaneous (%)	5	5	1.023	0.0926	1.023	0.0926	0.0414	9.05%	0.0130	3.99%
032.44	Potassium, ICP, Dry ash (%)	2	2	0.9603	0.0292						
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	1.006	0.0050						
032.53	Potassium, ICP-MS, Microwave (%)	2	2	0.9633	0.0118						
032.32	Potassium, AAS, Open vessel (%)	1	1	0.9900							
032.51	Potassium, ICP-MS, Dry ash (%)	1	1	0.8900							
033.01	Salt as chloride, Poten Cl (%)	30	29	0.5615	0.0311	<b>0.5588</b>	0.0248	0.0058	4.45%	0.0129	4.37%
033.00	Salt as chloride, Sol Cl (%)	17	17	0.5327	0.0654	<b>0.5317</b>	0.0634	0.0192	11.92%	0.0376	4.40%
033.99	Salt, Miscellaneous (%)	13	12	0.6680	0.3052	<b>0.5931</b>	0.1113	0.0402	18.76%	0.0350	4.33%
033.03	Salt as chloride, Quantab (%)	5	5	0.5440	0.1866	0.5440	0.1866	0.0835	34.31%	0.0733	4.38%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	0.5025	0.0460						
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	6	5	1.079	0.3623	1.079	0.3623	0.2026	33.57%	0.0346	15.81%
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	5	5	0.9506	0.0621	0.9506	0.0621	0.0278	6.53%	0.0690	16.12%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	4	4	0.5093	0.2815	0.5093	0.2815	0.1407	55.27%	0.0715	17.71%
034.41	Selenium, Total (Se), ICP, Dry ash (ppm)	2	2	0.8990	0.0297						
034.52	Selenium, Total (Se), ICP-MS, Open vessel (ppm)	2	2	1.420	0.7782						
034.01	Selenium, Total (Se), Fluor (ppm)	1	1	0.9800							
034.34	Selenium, Total (Se), AAS, Graphite furnace (ppm)	1	1	0.1900							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	1	1	1.400							
034.99	Selenium, Total (Se), Miscellaneous (ppm)	1	1	1.335							
035.43	Sodium, ICP, Microwave (%)	24	23	0.2283	0.0359	<b>0.2203</b>	0.0137	0.0036	6.21%	0.0080	5.02%
035.41	Sodium, ICP, Dry ash (%)	19	19	0.2187	0.0116	<b>0.2184</b>	0.0106	0.0030	4.86%	0.0104	5.03%
035.42	Sodium, ICP, Open vessel (%)	17	17	0.2325	0.0548	<b>0.2206</b>	0.0172	0.0052	7.80%	0.0096	5.02%
035.31	Sodium, AAS, Dry ash (%)	7	7	0.3695	0.3627	<b>0.2435</b>	0.0429	0.0203	17.63%	0.0236	4.95%
035.99	Sodium, Miscellaneous (%)	4	3	0.2167	0.0202	0.2167	0.0202	0.0117	9.33%	0.0100	5.03%
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.2065	0.0021						
035.01	Sodium, Ion-selective electrode (%)	1	1	0.2920							
035.02	Sodium, Em Spect (%)	1	1	0.2050							
035.05	Sodium, Flame Emission (%)	1	1	0.2200							
035.52	Sodium, ICP-MS, Open vessel (%)	1	1	0.2312							
036.43	Sulfur, ICP, Microwave (%)	23	23	0.3792	0.0227	<b>0.3789</b>	0.0230	0.0060	6.07%	0.0096	4.63%
036.42	Sulfur, ICP, Open vessel (%)	19	19	0.3547	0.0333	<b>0.3575</b>	0.0300	0.0086	8.39%	0.0129	4.67%
036.04	Sulfur, LECO (%)	5	5	0.3709	0.0166	0.3709	0.0166	0.0074	4.47%	0.0076	4.64%
036.99	Sulfur, Miscellaneous (%)	2	2	0.3375	0.0318						

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036.00	Sulfur, Gravimetric (%)	1	1	0.4025							
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.3722							
037.43	Zinc, ICP, Microwave (ppm)	34	33	385.5	28.97	385.9	31.71	6.899	8.22%	12.96	6.53%
037.42	Zinc, ICP, Open vessel (ppm)	21	20	392.6	56.74	391.7	61.55	17.20	15.71%	18.88	6.51%
037.41	Zinc, ICP, Dry ash (ppm)	17	17	371.6	26.64	370.7	24.94	7.560	6.73%	14.87	6.57%
037.31	Zinc, AAS, Dry ash (ppm)	12	12	376.6	39.30	377.8	41.82	15.09	11.07%	10.42	6.55%
037.44	Zinc, ICP, Dry ash (ppm)	3	3	364.1	21.42	364.1	21.42	12.37	5.88%	14.90	6.59%
037.99	Zinc, Miscellaneous (ppm)	4	3	346.0	8.226	346.0	8.226	4.749	2.38%	11.00	6.64%
037.53	Zinc, ICP-MS, Microwave (ppm)	2	2	379.2	5.365						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	368.5							
037.33	Zinc, AAS, Microwave (ppm)	1	1	359.4							
037.52	Zinc, ICP-MS, Open vessel (ppm)	1	1	408.9							
038.43	Molybdenum, ICP, Microwave (ppm)	8	8	1.398	0.3903	1.398	0.4426	0.1956	31.67%	0.0670	15.21%
038.42	Molybdenum, ICP, Open vessel (ppm)	5	5	1.556	0.3068	1.556	0.3068	0.1372	19.72%	0.3608	14.97%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	1.647	0.3077						
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	2	2	1.270	0.0354						
038.53	Molybdenum, ICP-MS, Microwave (ppm)	2	2	1.626	0.0302						
038.99	Molybdenum, Miscellaneous (ppm)	1	1	1.605							
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	12.10							
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	1.536							
042.00	Chloride, Titrimetric (%)	6	6	0.3850	0.0895	0.3712	0.0672	0.0343	18.11%	0.0150	4.64%
042.99	Chloride, Miscellaneous (%)	2	2	0.6650	0.4596						
042.01	Chloride, Ion-selective electrode (%)	1	1	0.3455							
101.99	Choline Chloride, Miscellaneous (ppm)	1	1	2,445							
102.01	Niacin, Microbiological (ppm)	1	1	156.5							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	17.40							
104.00	Riboflavin, Fluorometric (ppm)	1	1	5.565							
104.03	Riboflavin, LC (ppm)	1	1	3.455							
105.00	Thiamine, LC (ppm)	1	1	7.130							
105.01	Thiamine, Fluorometer (ppm)	1	1	13.48							
106.02	Vitamin A, LC (KU / kg)	12	11	6.734	1.748	6.630	1.519	0.5726	22.91%	0.6458	
106.00	Vitamin A, Color (KU / kg)	1	1	7.730							
106.01	Vitamin A, UV (KU / kg)	1	1	7.635							
106.99	Vitamin A, Miscellaneous (KU / kg)	1	1	4.155							
107.00	Vitamin B12, Microbiological (ppb)	1	1	16.20							
108.02	Vitamin D3, LC (KU / kg)	1	1	3.100							
109.02	Vitamin E, LC (IU / kg)	11	11	80.67	37.59	73.89	22.65	8.538	30.66%	4.545	
109.99	Vitamin E, Miscellaneous (IU / kg)	1	1	50.00							
111.00	Vitamin C, Phosphorylated, LC (ppm)	1		4.400							
111.98	Vitamin C, Ascorbic Acid, Miscellaneous (ppm)	1		0.1000							

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112.01	Pyridoxine, LC (µg / g)	1	1	5.350							
113.01	Folic Acid, Micro (ppm)	1	1	4.215							
114.01	Biotin, Microbiological (ppm)	1	1	0.8235							
114.99	Biotin, Miscellaneous (ppm)	1	1	0.8480							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	4	4	1.083	0.8283	1.083	0.8283	0.4141	76.49%	0.0269	3.95%
115.99	Non Protein N (NPN), Miscellaneous (%)	2	2	1.045	0.2468						
120.00	Alanine, Post-col Ninhydrin Der (%)	18	17	1.016	0.0575	1.023	0.0280	0.0085	2.73%	0.0106	3.99%
120.05	Alanine, Pre-col AQC Der (%)	10	9	1.031	0.0790	1.032	0.0867	0.0361	8.39%	0.0306	3.98%
120.99	Alanine, Miscellaneous (%)	4	4	1.005	0.0376	1.005	0.0376	0.0188	3.75%	0.0100	4.00%
120.02	Alanine, Post-col OPA Der (%)	1	1	1.013							
121.00	Arginine, Post-col Ninhydrin Der (%)	18	17	1.233	0.0442	1.231	0.0451	0.0137	3.67%	0.0121	3.88%
121.05	Arginine, Pre-col AQC Der (%)	10	9	1.212	0.1152	1.212	0.1306	0.0544	10.78%	0.0392	3.89%
121.99	Arginine, Miscellaneous (%)	4	3	1.237	0.0306	1.237	0.0306	0.0176	2.47%	0.0300	3.87%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.156							
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	17	1.427	0.0495	1.424	0.0424	0.0129	2.98%	0.0186	3.79%
122.05	Aspartic, Pre-col AQC Der (%)	10	9	1.435	0.1145	1.435	0.1294	0.0539	9.02%	0.0518	3.79%
122.99	Aspartic, Miscellaneous (%)	4	4	1.425	0.0981	1.425	0.0981	0.0490	6.88%	0.0167	3.79%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.405							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	18	18	0.4115	0.0458	0.4140	0.0333	0.0098	8.03%	0.0100	4.57%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	10	9	0.4192	0.1119	0.4042	0.0880	0.0367	21.78%	0.0117	4.58%
124.99	Cysteine/Cystine, Miscellaneous (%)	5	4	0.3544	0.0292	0.3544	0.0292	0.0146	8.23%	0.0075	4.68%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.4215							
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	18	3.514	0.1084	3.514	0.0926	0.0273	2.64%	0.0498	3.31%
125.05	Glutamic, Pre-col AQC Der (%)	10	9	3.543	0.2858	3.545	0.3186	0.1328	8.99%	0.1211	3.31%
125.99	Glutamic, Miscellaneous (%)	4	4	3.308	0.3443	3.308	0.3443	0.1722	10.41%	0.0250	3.34%
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.342							
126.00	Glycine, Post-col Ninhydrin Der (%)	18	17	1.012	0.0417	1.015	0.0350	0.0106	3.45%	0.0111	3.99%
126.05	Glycine, Pre-col AQC Der (%)	10	9	1.028	0.0532	1.028	0.0603	0.0251	5.86%	0.0317	3.98%
126.99	Glycine, Miscellaneous (%)	4	4	0.8550	0.2530	0.8550	0.2530	0.1265	29.59%	0.0100	4.10%
126.02	Glycine, Post-col OPA Der (%)	1	1	1.007							
127.00	Histidine, Post-col Ninhydrin Der (%)	18	18	0.5342	0.0318	0.5317	0.0226	0.0067	4.26%	0.0091	4.40%
127.05	Histidine, Pre-col AQC Der (%)	10	10	0.5337	0.0683	0.5307	0.0705	0.0279	13.29%	0.0403	4.40%
127.99	Histidine, Miscellaneous (%)	4	4	0.5000	0.0248	0.5000	0.0248	0.0124	4.97%	0.0133	4.44%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.5210							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	18	18	0.7037	0.0499	0.6957	0.0340	0.0100	4.88%	0.0110	4.22%
128.05	Isoleucine, Pre-col AQC Der (%)	10	9	0.6985	0.0746	0.7045	0.0699	0.0291	9.93%	0.0216	4.22%
128.99	Isoleucine, Miscellaneous (%)	3	3	0.6850	0.0391	0.6850	0.0391	0.0276	5.70%		4.23%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.6715							
129.00	Leucine, Post-col Ninhydrin Der (%)	18	18	1.459	0.0615	1.454	0.0511	0.0150	3.51%	0.0245	3.78%
129.05	Leucine, Pre-col AQC Der (%)	10	9	1.423	0.1216	1.429	0.1233	0.0514	8.62%	0.0240	3.79%

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129.99	Leucine, Miscellaneous (%)	4	4	1.417	0.0603	1.417	0.0603	0.0301	4.25%	0.0117	3.80%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.397							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	20	20	0.9262	0.0591	0.9198	0.0504	0.0141	5.48%	0.0110	4.05%
130.05	L-Lysine, Pre-col AQC Der (%)	11	10	0.9199	0.0563	0.9202	0.0633	0.0250	6.88%	0.0394	4.05%
130.99	L-Lysine, Miscellaneous (%)	6	6	0.9312	0.0740	0.9312	0.0839	0.0428	9.01%	0.0601	4.04%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.9650							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	18	0.3443	0.0461	0.3523	0.0250	0.0074	7.09%	0.0081	4.68%
131.05	Methionine, PAO Pre-col AQC Der (%)	10	9	0.3239	0.0692	0.3160	0.0586	0.0244	18.53%	0.0144	4.76%
131.99	Methionine, Miscellaneous (%)	5	5	0.3300	0.0256	0.3300	0.0256	0.0114	7.75%	0.0271	4.73%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.3485							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	18	0.8242	0.0388	0.8229	0.0380	0.0112	4.62%	0.0128	4.12%
132.05	Phenylalanine, Pre-col AQC Der (%)	10	9	0.8054	0.0389	0.8040	0.0403	0.0168	5.02%	0.0262	4.13%
132.99	Phenylalanine, Miscellaneous (%)	4	4	0.8381	0.0544	0.8381	0.0544	0.0272	6.50%	0.0083	4.11%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.7810							
133.00	Proline, Post-col Ninhydrin Der (%)	18	17	1.285	0.0630	1.277	0.0544	0.0165	4.26%	0.0231	3.86%
133.05	Proline, Pre-col AQC Der (%)	10	9	1.302	0.1628	1.282	0.1354	0.0564	10.56%	0.0426	3.85%
133.99	Proline, Miscellaneous (%)	4	3	1.083	0.0189	1.083	0.0189	0.0109	1.74%	0.0225	3.95%
134.00	Serine, Post-col Ninhydrin Der (%)	18	18	0.8738	0.0396	0.8763	0.0390	0.0115	4.46%	0.0145	4.08%
134.05	Serine, Pre-col AQC Der (%)	10	10	0.9113	0.0557	0.9124	0.0606	0.0239	6.64%	0.0338	4.06%
134.99	Serine, Miscellaneous (%)	4	4	0.8731	0.0699	0.8731	0.0699	0.0350	8.01%	0.0083	4.08%
134.02	Serine, Post-col OPA Der (%)	1	1	0.7390							
135.00	Threonine, Post-col Ninhydrin Der (%)	18	18	0.7441	0.0301	0.7446	0.0323	0.0095	4.34%	0.0108	4.18%
135.05	Threonine, Pre-col AQC Der (%)	10	9	0.7409	0.0440	0.7411	0.0494	0.0206	6.66%	0.0183	4.18%
135.99	Threonine, Miscellaneous (%)	5	4	0.7281	0.0180	0.7281	0.0180	0.0104	2.47%	0.0075	4.20%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.7035							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	9	9	0.2765	0.0213	0.2719	0.0093	0.0039	3.43%	0.0048	4.87%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	6	6	0.2558	0.0446	0.2558	0.0505	0.0258	19.76%	0.0150	4.91%
136.05	Tryptophan, Pre-col AQC Der (%)	4	4	0.2489	0.0252	0.2489	0.0252	0.0126	10.14%	0.0115	4.93%
136.99	Tryptophan, Miscellaneous (%)	4	4	0.3124	0.1663	0.3124	0.1663	0.0831	53.21%	0.0065	4.77%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.2898	0.0074						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.2635							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	14	0.5682	0.0472	0.5682	0.0535	0.0179	9.41%	0.0140	4.35%
137.05	Tyrosine, Pre-col AQC Der (%)	10	10	0.5620	0.0800	0.5620	0.0907	0.0358	16.14%	0.0344	4.36%
137.99	Tyrosine, Miscellaneous (%)	4	4	0.5681	0.0338	0.5681	0.0338	0.0169	5.94%	0.0138	4.35%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.4775							
138.00	Valine, Post-col Ninhydrin Der (%)	18	18	0.9621	0.0736	0.9494	0.0494	0.0145	5.20%	0.0155	4.03%
138.05	Valine, Pre-col AQC Der (%)	10	9	0.9147	0.1081	0.9172	0.1170	0.0487	12.75%	0.0222	4.05%
138.99	Valine, Miscellaneous (%)	4	4	0.9238	0.0643	0.9238	0.0643	0.0322	6.97%	0.0100	4.05%
138.02	Valine, Post-col OPA Der (%)	1	1	0.9715							
139.00	Taurine, Post-col Ninhydrin Der (%)	3	3	0.0700	0.0607	0.0700	0.0607	0.0429	86.71%		5.97%



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139.05	Taurine, Pre-col AQC Der (%)	2	1	0.0655							
139.99	Taurine, Miscellaneous (%)	3	1								
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
160.10	Fructose, HPAEC PAD (%)	1	1	0.1300							
160.99	Fructose, Miscellaneous (%)	1	1	0.2050							
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.99	Glucose, Miscellaneous (%)	2	2	2.123	2.090						
162.10	Glucose, HPAEC PAD (%)	1	1	0.1650							
163.10	Lactose, HPAEC PAD (%)	1		0.0000							
163.99	Lactose, Miscellaneous (%)	1		0.1500							
164.10	Maltose, HPAEC PAD (%)	1	1	0.1400							
164.99	Maltose, Miscellaneous (%)	1	1	0.2300							
165.10	Sucrose, HPAEC PAD (%)	1	1	2.600							
165.99	Sucrose, Miscellaneous (%)	1	1	2.235							
166.10	Raffinose, HPAEC PAD (%)	1	1	0.7250							
166.99	Raffinose, Miscellaneous (%)	1	1	0.4600							
167.10	Stachyose, HPAEC PAD (%)	1	1	0.6850							
167.99	Stachyose, Miscellaneous (%)	1	1	0.3950							
345.00	Amprolium, Colorimetric (ppm)	4	4	227.6	77.68	227.6	77.68	38.84	34.13%	9.750	7.07%
345.02	Amprolium, LC (UV or FL) (ppm)	4	3	242.1	0.6754	242.1	0.6754	0.3899	0.28%	4.123	7.00%
345.04	Amprolium, LC-MS/MS (ppm)	1	1	230.4							
351.03	Chlortetracycline, LC (UV or FL) (ppm)	1		3.000							
354.01	Decoquinatate, LC (UV or FL) (ppm)	1		0.1000							
361.02	Lasalocid Sodium, LC (ppm)	1		0.3000							
365.02	Monensin, LC (ppm)	1		0.1000							
367.99	Nicarbazin, Miscellaneous (ppm)	1		0.1000							
386.99	Tiamulin, Miscellaneous (ppm)	1		1.000							
388.03	Tylosin, LC (ppm)	1	1	2.050							
392.99	Fenbendazole, Miscellaneous (ppm)	1		1.000							
400.01	Water Activity, Aqualab chilled mirror (Units)	13	12	0.5570	0.0332	0.5580	0.0336	0.0121	6.02%	0.0060	
400.99	Water Activity, Miscellaneous (Units)	1	1	0.5505							
413.01	Starch, Resistant, Enzymatic-Colorimetric (%)	1	1	0.5500							
516.52	Arsenic, Total (As), ICP-MS, Open vessel (ppm)	2	2	0.2269	0.0098						
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	2	2	0.2410	0.0234						
516.00	Arsenic, Total (As), AA, Hydride (ppm)	1	1	0.2350							
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	2		1.420							
518.43	Cadmium, ICP, Microwave (ppm)	4	3	0.1697	0.0379	0.1697	0.0379	0.0219	22.35%	0.0075	20.89%
518.53	Cadmium, ICP-MS, Microwave (ppm)	3	3	0.1479	0.0155	0.1479	0.0155	0.0090	10.49%	0.0034	21.33%
518.52	Cadmium, ICP-MS, Open vessel (ppm)	2	2	0.1485	0.0050						
518.41	Cadmium, ICP, Dry ash (ppm)	1	1	0.1437							

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (Rob R-bar)	Thompson Horwitz %RSD
518.99	Cadmium, Miscellaneous (ppm)	1	1	0.1506							
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	7	7	5.147	1.535	5.147	1.741	0.8224	33.82%	0.4341	12.50%
520.42	Chromium, Total (Cr), ICP, Open vessel (ppm)	3	3	5.068	0.9265	5.068	0.9265	0.5349	18.28%	0.3400	12.53%
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	3	3	4.957	0.2825	4.957	0.2825	0.1631	5.70%	0.2942	12.57%
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	1	1	3.562							
520.51	Chromium, Total (Cr), ICP-MS, Dry ash (ppm)	1	1	1.595							
520.52	Chromium, Total (Cr), ICP-MS, Open vessel (ppm)	1	1	1.676							
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.1101	0.0138	0.1101	0.0138	0.0079	12.50%	0.0046	22.00%
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.1073							
526.43	Lead, ICP, Microwave (ppm)	3	1								
526.52	Lead, ICP-MS, Open vessel (ppm)	2	1	0.1056							
529.99	Mercury, Miscellaneous (ppb)	4	1								
539.43	Nickel, ICP, Microwave (ppm)	5	5	3.519	0.6391	3.519	0.6391	0.2858	18.16%	0.0501	13.24%
539.41	Nickel, ICP, Dry ash (ppm)	1	1	2.511							
539.51	Nickel, ICP-MS, Dry ash (ppm)	1	1	1.525							
539.52	Nickel, ICP-MS, Open vessel (ppm)	1	1	1.712							
539.53	Nickel, ICP-MS, Microwave (ppm)	1	1	3.003							
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1		0.0200							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	1		0.0200							
706.99	Caprylic acid (8:0), Miscellaneous (%) (w/w)	2		0.0200							
708.99	Capric acid (10:0), Miscellaneous (%) (w/w)	2		0.0200							
710.99	Lauric Acid (12:0), Miscellaneous (%) (w/w)	4									
714.99	Myristic Acid (14:0) , Miscellaneous (%) (w/w)	3	2	0.0604	0.0773	0.0604	0.0773				6.10%
716.99	Palmitic Acid (16:0), Miscellaneous (%) (w/w)	3	3	5.134	7.877	5.134	7.877	5.570	153.42%	0.0176	3.13%
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (%) (w/w)	4	3	0.1202	0.1860	0.1202	0.1860	0.1315	154.70%	0.0051	5.50%
720.99	Margaric acid (17:0), Miscellaneous (%) (w/w)	1		0.0200							
722.99	Stearic Acid (18:0), Miscellaneous (%) (w/w)	3	3	0.6535	1.002	0.6535	1.002	0.7082	153.27%	0.0076	4.26%
724.99	Oleic Acid (9c-18:1), Miscellaneous (%) (w/w)	3	3	8.046	12.48	8.046	12.48	8.827	155.14%	0.0883	2.92%
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (%) (w/w)	4	3	1.855	0.2497	1.855	0.2497	0.1442	13.47%	0.0222	3.64%
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (%) (w/w)	4	3	0.1399	0.0451	0.1399	0.0451	0.0261	32.26%	0.0024	5.38%
730.99	Arachidic Acid (20:0), Miscellaneous (%) (w/w)	3	2	0.1740	0.2277	0.1740	0.2277			0.0053	5.20%
732.99	Gondoic Acid (11c-20:1), Miscellaneous (%) (w/w)	2	1	0.0203							
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (%) (w/w)	2		0.0000							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (%) (w/w)	4									
742.99	Behenic Acid (22:0), Miscellaneous (%) (w/w)	3	2	0.1750	0.2334	0.1750	0.2334			0.0201	5.20%
744.99	Erucic Acid (13c-22:1), Miscellaneous (%) (w/w)	3	1								
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (%)	4									
748.99	Lignoceric Acid (24:0), Miscellaneous (%) (w/w)	3	2	0.1612	0.2105	0.1612	0.2105			0.0101	5.26%
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (%)	4									
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (%) (w/w)	2		0.0050							

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) - Robust	% RSD - Robust	Average Range (Rob R-bar)	Thompson Horwitz %RSD
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	2	2	0.1423	0.0746						
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	2	2	1.760	0.2546						
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	2	2	9.066	11.80						
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	23.64							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	0.8345							
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	54.27							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.672							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	3.388							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	3	3	3.801	0.5315	3.801	0.5315	0.3069	13.98%	0.0215	3.27%

Notes: Robust statistics not used if < 6 labs reporting. In this case Means and SD's may be reported based on Raw Data with obvious blunders removed. Robust Assigned Values indicated in bold font.



**Animal Feed Scheme**

**Deer Feed, Medicated**

**Test Material Code # 202331**

**Method Precision Report**

**# Methods Reported: 130**

**# Labs Reporting: 171**

**Issue Date : 12/31/2023**

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
000.02	Urea, As protein, Colorimetric (%)	5	5	1.400	0.9095	0.9065	0.1046	0.9125	64.75%	7.47%	65.18%	8.725
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	47	42	9.218	0.4847	0.2511	0.0576	0.2576	2.72%	0.62%	2.79%	4.475
001.99	Loss on Drying, Miscellaneous (%)	20	17	9.241	0.5691	0.4348	0.0847	0.4429	4.68%	0.91%	4.76%	5.230
002.01	Protein, Crude, Auto Kjel-Foss (%)	17	16	22.24	0.2867	0.2756	0.1117	0.2974	1.24%	0.50%	1.34%	2.661
002.05	Protein, Crude, Copper, Boric Acid (%)	29	26	22.20	0.2810	0.1994	0.0880	0.2179	0.90%	0.40%	0.98%	2.476
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	114	107	22.58	0.4015	0.2957	0.1845	0.3485	1.31%	0.82%	1.54%	1.889
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	9	8	3.778	0.2408	0.2336	0.0829	0.2479	6.18%	2.19%	6.56%	2.991
003.06	Fat, Crude, Pet Ether (%)	17	17	3.644	0.2388	0.2230	0.1206	0.2536	6.12%	3.31%	6.96%	2.102
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	10	10	3.719	0.1566	0.1214	0.1398	0.1851	3.26%	3.76%	4.98%	1.325
003.10	Fat, Crude, Randall, Pet Ether (%)	31	30	3.517	0.2346	0.2302	0.0878	0.2464	6.55%	2.50%	7.01%	2.805
003.14	Fat, Crude, Ankom (%)	58	53	3.569	0.3807	0.2535	0.0995	0.2723	6.98%	2.74%	7.49%	2.738
004.00	Fiber, Crude, Asbestos Free (%)	11	11	11.35	0.6909	0.6594	0.2915	0.7210	5.81%	2.57%	6.35%	2.473
004.06	Fiber, Crude, Fibertec (%)	19	16	10.83	0.8156	0.3854	0.1525	0.4145	3.56%	1.41%	3.83%	2.718
004.07	Fiber, Crude, ANKOM (%)	84	77	11.32	0.8835	0.7490	0.1904	0.7728	6.67%	1.69%	6.88%	4.059
005.00	Ash, 2h @ 600°C (%)	93	89	9.313	1.075	0.4125	0.1061	0.4259	4.48%	1.15%	4.62%	4.013
005.05	Ash, 3h @ 550°C (%)	28	25	9.556	0.3268	0.2064	0.1013	0.2299	2.16%	1.06%	2.40%	2.271
005.99	Ash, Miscellaneous (%)	13	10	9.436	0.3210	0.2204	0.0681	0.2307	2.32%	0.72%	2.43%	3.387
008.02	Fiber, Acid Detergent, Crucible (%)	13	13	15.68	0.7127	0.6542	0.3999	0.7667	4.17%	2.55%	4.89%	1.917
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	48	44	15.24	2.253	1.147	0.3070	1.187	7.33%	1.96%	7.59%	3.866
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	13	32.75	1.749	1.713	0.3332	1.745	5.21%	1.01%	5.31%	5.238
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	45	40	31.07	3.724	1.508	0.2750	1.533	4.74%	0.86%	4.82%	5.575
010.99	Moisture, Miscellaneous (%)	16	15	9.180	0.4043	0.3727	0.0849	0.3822	4.04%	0.92%	4.14%	4.505
011.01	Loss on Drying, HT, 135°C 2hr (%)	70	62	10.12	0.6484	0.3613	0.0990	0.3746	3.55%	0.97%	3.68%	3.785
012.00	Starch, Polarimetric (Ewers) (%)	16	14	14.07	0.4665	0.4479	0.1843	0.4843	3.18%	1.31%	3.44%	2.628
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	14	13	12.86	5.065	2.276	0.3220	2.299	19.55%	2.77%	19.74%	7.138
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	7	7	12.24	0.8364	0.7869	0.4009	0.8831	6.43%	3.27%	7.21%	2.203
013.00	Fat, Pretreat, Acid hydrolysis (%)	20	20	4.534	0.5900	0.5770	0.1735	0.6026	12.73%	3.83%	13.29%	3.472
013.02	Fat, Pretreat, Mojonier, Bak Ext, Acid hydrolysis (%)	16	15	5.104	0.4379	0.4345	0.0772	0.4413	8.51%	1.51%	8.65%	5.718
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	7	7	4.280	0.3205	0.3161	0.0749	0.3249	7.39%	1.75%	7.59%	4.335
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	8	8	4.915	0.9063	0.8941	0.2096	0.9183	18.19%	4.26%	18.68%	4.381
015.43	Aluminum, ICP, Microwave (ppm)	8	6	148.5	26.09	14.57	3.026	14.88	9.45%	1.96%	9.66%	4.917
017.41	Boron, ICP, Dry ash (ppm)	5	5	8.092	0.7441	0.6875	0.4027	0.7967	8.50%	4.98%	9.85%	1.978
017.43	Boron, ICP, Microwave (ppm)	8	6	8.243	0.8675	0.8575	0.1859	0.8774	10.40%	2.25%	10.64%	4.721
019.00	Calcium, Ox-Mn04 Vol. (%)	7	6	1.689	0.0723	0.0520	0.0296	0.0598	3.04%	1.73%	3.50%	2.024
019.08	Calcium, EDTA (%)	12	12	1.733	0.0955	0.0942	0.0224	0.0968	5.44%	1.29%	5.59%	4.324
019.31	Calcium, AAS, Dry ash (%)	17	16	1.666	0.1011	0.0999	0.0225	0.1024	6.00%	1.35%	6.15%	4.556

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
019.41	Calcium, ICP, Dry ash (%)	21	20	1.702	0.0852	0.0834	0.0345	0.0902	4.90%	2.03%	5.31%	2.617
019.42	Calcium, ICP, Open vessel (%)	20	18	1.755	0.1494	0.1084	0.0702	0.1292	6.22%	4.03%	7.41%	1.839
019.43	Calcium, ICP, Microwave (%)	37	34	1.731	0.0905	0.0713	0.0371	0.0804	4.10%	2.14%	4.63%	2.165
019.99	Calcium, Miscellaneous (%)	6	6	1.741	0.1799	0.1740	0.0647	0.1857	10.00%	3.72%	10.67%	2.868
021.43	Cobalt, ICP, Microwave (ppm)	8	8	3.406	0.3937	0.3903	0.0721	0.3970	11.46%	2.12%	11.66%	5.504
022.31	Copper, AAS, Dry ash (ppm)	11	11	83.84	6.762	6.560	2.319	6.958	7.82%	2.77%	8.30%	3.001
022.41	Copper, ICP, Dry ash (ppm)	16	16	82.22	9.987	9.598	3.904	10.36	11.67%	4.75%	12.60%	2.654
022.42	Copper, ICP, Open vessel (ppm)	22	21	96.40	6.795	6.065	4.335	7.455	6.29%	4.50%	7.73%	1.720
022.43	Copper, ICP, Microwave (ppm)	33	31	96.62	9.785	7.344	3.828	8.282	7.70%	4.01%	8.69%	2.164
025.31	Iron, AAS, Dry ash (ppm)	12	10	299.2	26.35	17.89	4.614	18.47	5.86%	1.51%	6.05%	4.004
025.41	Iron, ICP, Dry ash (ppm)	19	17	293.4	17.19	11.88	8.015	14.33	4.01%	2.70%	4.83%	1.788
025.42	Iron, ICP, Open vessel (ppm)	20	18	293.3	27.91	21.88	8.985	23.65	7.56%	3.10%	8.17%	2.632
025.43	Iron, ICP, Microwave (ppm)	32	27	302.0	25.31	17.85	8.125	19.61	5.92%	2.70%	6.51%	2.414
027.31	Magnesium, AAS, Dry ash (%)	10	9	0.3902	0.0192	0.0190	0.0043	0.0195	4.86%	1.10%	4.99%	4.526
027.41	Magnesium, ICP, Dry ash (%)	18	16	0.3940	0.0173	0.0164	0.0093	0.0189	4.17%	2.36%	4.79%	2.028
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.3949	0.0260	0.0248	0.0108	0.0271	6.29%	2.73%	6.85%	2.511
027.43	Magnesium, ICP, Microwave (%)	32	30	0.3964	0.0264	0.0228	0.0074	0.0239	5.73%	1.86%	6.02%	3.242
028.31	Manganese, AAS, Dry ash (ppm)	10	8	366.5	87.79	11.87	4.800	12.81	2.99%	1.21%	3.22%	2.668
028.41	Manganese, ICP, Dry ash (ppm)	16	14	369.6	33.68	17.73	11.36	21.06	4.71%	3.01%	5.59%	1.854
028.42	Manganese, ICP, Open vessel (ppm)	22	21	396.6	27.71	26.56	11.17	28.81	6.70%	2.82%	7.27%	2.578
028.43	Manganese, ICP, Microwave (ppm)	30	27	398.7	29.01	25.43	9.523	27.16	6.34%	2.38%	6.77%	2.852
031.01	Phosphorus, Photometric (%)	36	32	0.9899	0.0313	0.0272	0.0072	0.0281	2.74%	0.72%	2.83%	3.909
031.41	Phosphorus, ICP, Dry ash (%)	20	19	0.9973	0.0431	0.0412	0.0199	0.0457	4.14%	1.99%	4.59%	2.303
031.42	Phosphorus, ICP, Open vessel (%)	20	18	0.9799	0.0828	0.0830	0.0237	0.0863	8.45%	2.42%	8.79%	3.636
031.43	Phosphorus, ICP, Microwave (%)	35	33	1.006	0.0532	0.0390	0.0179	0.0429	3.86%	1.77%	4.24%	2.400
031.99	Phosphorus, Miscellaneous (%)	6	6	0.9629	0.0596	0.0594	0.0072	0.0598	6.17%	0.75%	6.21%	8.287
032.31	Potassium, AAS, Dry ash (%)	8	7	0.9144	0.0673	0.0671	0.0065	0.0674	7.34%	0.72%	7.37%	10.30
032.41	Potassium, ICP, Dry ash (%)	19	19	0.9505	0.0623	0.0599	0.0241	0.0646	6.31%	2.53%	6.80%	2.683
032.42	Potassium, ICP, Open vessel (%)	19	19	1.024	0.0733	0.0709	0.0261	0.0756	6.92%	2.55%	7.38%	2.893
032.43	Potassium, ICP, Microwave (%)	34	30	0.9884	0.0456	0.0298	0.0150	0.0334	3.00%	1.51%	3.35%	2.224
032.99	Potassium, Miscellaneous (%)	5	5	1.023	0.0926	0.0924	0.0086	0.0928	9.03%	0.84%	9.07%	10.80
033.00	Salt as chloride, Sol Cl (%)	17	17	0.5327	0.0654	0.0622	0.0285	0.0685	11.68%	5.35%	12.85%	2.402
033.01	Salt as chloride, Poten Cl (%)	30	27	0.5615	0.0311	0.0194	0.0095	0.0216	3.49%	1.71%	3.88%	2.269
033.03	Salt as chloride, Quantab (%)	5	5	0.5440	0.1866	0.1838	0.0460	0.1894	33.78%	8.46%	34.82%	4.115
033.99	Salt, Miscellaneous (%)	13	11	0.6680	0.3052	0.1482	0.0277	0.1507	25.11%	4.69%	25.54%	5.448
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	6	5	1.079	0.3623	0.3617	0.0303	0.3630	33.51%	2.81%	33.63%	11.96
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	5	5	0.9506	0.0621	0.0409	0.0660	0.0777	4.31%	6.95%	8.17%	1.177
035.31	Sodium, AAS, Dry ash (%)	7	6	0.3695	0.3627	0.0257	0.0134	0.0290	11.06%	5.74%	12.46%	2.170
035.41	Sodium, ICP, Dry ash (%)	19	17	0.2187	0.0116	0.0062	0.0075	0.0098	2.84%	3.44%	4.47%	1.297
035.42	Sodium, ICP, Open vessel (%)	17	14	0.2325	0.0548	0.0176	0.0059	0.0186	8.00%	2.69%	8.43%	3.141
035.43	Sodium, ICP, Microwave (%)	24	22	0.2283	0.0359	0.0183	0.0060	0.0192	8.24%	2.71%	8.68%	3.202
036.04	Sulfur, LECO (%)	5	5	0.3709	0.0166	0.0159	0.0064	0.0172	4.30%	1.72%	4.63%	2.693
036.42	Sulfur, ICP, Open vessel (%)	19	18	0.3547	0.0333	0.0238	0.0098	0.0257	6.61%	2.73%	7.15%	2.623
036.43	Sulfur, ICP, Microwave (%)	23	22	0.3792	0.0227	0.0221	0.0078	0.0235	5.83%	2.04%	6.17%	3.026
037.31	Zinc, AAS, Dry ash (ppm)	12	11	376.6	39.30	35.42	8.008	36.31	9.55%	2.16%	9.79%	4.535
037.41	Zinc, ICP, Dry ash (ppm)	17	15	371.6	26.64	20.19	13.69	24.39	5.50%	3.73%	6.65%	1.782

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
037.42	Zinc, ICP, Open vessel (ppm)	21	20	392.6	56.74	54.93	20.10	58.49	13.99%	5.12%	14.90%	2.911
037.43	Zinc, ICP, Microwave (ppm)	34	32	385.5	28.97	27.70	11.44	29.97	7.20%	2.98%	7.79%	2.618
038.42	Molybdenum, ICP, Open vessel (ppm)	5	5	1.556	0.3068	0.2159	0.3082	0.3763	13.88%	19.80%	24.18%	1.221
038.43	Molybdenum, ICP, Microwave (ppm)	8	7	1.398	0.3903	0.4185	0.0341	0.4199	30.26%	2.47%	30.36%	12.31
042.00	Chloride, Titrimetric (%)	6	5	0.3850	0.0895	0.0364	0.0055	0.0368	10.38%	1.56%	10.50%	6.727
106.02	Vitamin A, LC (KU / kg)	12	11	6.734	1.748	1.694	0.6066	1.800	25.16%	9.01%	26.73%	2.967
109.02	Vitamin E, LC (IU / kg)	11	10	80.67	37.59	17.04	4.919	17.73	24.17%	6.98%	25.15%	3.605
120.00	Alanine, Post-col Ninhydrin Der (%)	18	16	1.016	0.0575	0.0400	0.0073	0.0406	3.89%	0.71%	3.96%	5.578
120.05	Alanine, Pre-col AQC Der (%)	10	9	1.031	0.0790	0.0778	0.0188	0.0801	7.55%	1.82%	7.77%	4.259
121.00	Arginine, Post-col Ninhydrin Der (%)	18	16	1.233	0.0442	0.0389	0.0088	0.0398	3.17%	0.71%	3.24%	4.548
121.05	Arginine, Pre-col AQC Der (%)	10	8	1.212	0.1152	0.1167	0.0259	0.1195	9.54%	2.12%	9.77%	4.615
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	16	1.427	0.0495	0.0382	0.0119	0.0400	2.69%	0.84%	2.82%	3.366
122.05	Aspartic, Pre-col AQC Der (%)	10	9	1.435	0.1145	0.1106	0.0422	0.1184	7.71%	2.94%	8.25%	2.805
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	18	16	0.4115	0.0458	0.0286	0.0085	0.0298	6.88%	2.04%	7.18%	3.527
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	10	8	0.4192	0.1119	0.0637	0.0076	0.0641	16.43%	1.95%	16.54%	8.493
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	18	3.514	0.1084	0.1050	0.0385	0.1118	2.99%	1.09%	3.18%	2.906
125.05	Glutamic, Pre-col AQC Der (%)	10	9	3.543	0.2858	0.2783	0.0920	0.2931	7.86%	2.60%	8.27%	3.185
126.00	Glycine, Post-col Ninhydrin Der (%)	18	16	1.012	0.0417	0.0291	0.0086	0.0304	2.86%	0.84%	2.98%	3.551
126.05	Glycine, Pre-col AQC Der (%)	10	8	1.028	0.0532	0.0552	0.0180	0.0581	5.38%	1.76%	5.66%	3.223
127.00	Histidine, Post-col Ninhydrin Der (%)	18	16	0.5342	0.0318	0.0278	0.0052	0.0283	5.25%	0.99%	5.34%	5.409
127.05	Histidine, Pre-col AQC Der (%)	10	10	0.5337	0.0683	0.0640	0.0336	0.0723	11.99%	6.30%	13.54%	2.151
128.00	Isoleucine, Post-col Ninhydrin Der (%)	18	17	0.7037	0.0499	0.0346	0.0077	0.0354	4.98%	1.11%	5.10%	4.591
128.05	Isoleucine, Pre-col AQC Der (%)	10	9	0.6985	0.0746	0.0736	0.0174	0.0756	10.54%	2.49%	10.83%	4.356
129.00	Leucine, Post-col Ninhydrin Der (%)	18	17	1.459	0.0615	0.0475	0.0167	0.0503	3.28%	1.15%	3.47%	3.009
129.05	Leucine, Pre-col AQC Der (%)	10	9	1.423	0.1216	0.1208	0.0203	0.1225	8.49%	1.43%	8.61%	6.038
130.00	L-Lysine, Post-col Ninhydrin Der (%)	20	18	0.9262	0.0591	0.0440	0.0061	0.0445	4.78%	0.66%	4.83%	7.264
130.05	L-Lysine, Pre-col AQC Der (%)	11	10	0.9199	0.0563	0.0521	0.0300	0.0601	5.67%	3.26%	6.54%	2.004
130.99	L-Lysine, Miscellaneous (%)	6	5	0.9312	0.0740	0.0651	0.0245	0.0696	7.13%	2.68%	7.62%	2.839
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	17	0.3443	0.0461	0.0301	0.0067	0.0308	8.54%	1.89%	8.75%	4.624
131.05	Methionine, PAO Pre-col AQC Der (%)	10	8	0.3239	0.0692	0.0420	0.0093	0.0430	13.77%	3.06%	14.11%	4.610
131.99	Methionine, Miscellaneous (%)	5	5	0.3300	0.0256	0.0240	0.0125	0.0271	7.27%	3.79%	8.20%	2.164
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	17	0.8242	0.0388	0.0369	0.0090	0.0380	4.46%	1.09%	4.59%	4.201
132.05	Phenylalanine, Pre-col AQC Der (%)	10	8	0.8054	0.0389	0.0307	0.0178	0.0355	3.77%	2.19%	4.36%	1.991
133.00	Proline, Post-col Ninhydrin Der (%)	18	16	1.285	0.0630	0.0514	0.0132	0.0531	4.03%	1.04%	4.17%	4.011
133.05	Proline, Pre-col AQC Der (%)	10	7	1.302	0.1628	0.0879	0.0213	0.0905	6.89%	1.67%	7.09%	4.239
134.00	Serine, Post-col Ninhydrin Der (%)	18	18	0.8738	0.0396	0.0389	0.0102	0.0402	4.45%	1.16%	4.60%	3.952
134.05	Serine, Pre-col AQC Der (%)	10	9	0.9113	0.0557	0.0425	0.0226	0.0481	4.61%	2.45%	5.22%	2.133
135.00	Threonine, Post-col Ninhydrin Der (%)	18	17	0.7441	0.0301	0.0305	0.0072	0.0313	4.10%	0.96%	4.21%	4.373
135.05	Threonine, Pre-col AQC Der (%)	10	8	0.7409	0.0440	0.0463	0.0090	0.0472	6.27%	1.22%	6.38%	5.217
136.00	Tryptophan, Alka-Hydrol Post-col Ninhydrin Der (%)	6	5	0.2558	0.0446	0.0457	0.0032	0.0459	17.40%	1.20%	17.44%	14.50
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	9	8	0.2765	0.0213	0.0071	0.0039	0.0081	2.64%	1.43%	3.00%	2.102
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	14	0.5682	0.0472	0.0467	0.0094	0.0476	8.22%	1.65%	8.38%	5.078
137.05	Tyrosine, Pre-col AQC Der (%)	10	9	0.5620	0.0800	0.0709	0.0234	0.0746	12.32%	4.06%	12.98%	3.193
138.00	Valine, Post-col Ninhydrin Der (%)	18	16	0.9621	0.0736	0.0534	0.0105	0.0544	5.61%	1.11%	5.72%	5.169
138.05	Valine, Pre-col AQC Der (%)	10	8	0.9147	0.1081	0.0958	0.0141	0.0968	10.24%	1.51%	10.35%	6.878
400.01	Water Activity, Aqualab chilled mirror (Units)	13	11	0.5570	0.0332	0.0269	0.0047	0.0273	4.78%	0.83%	4.85%	5.856

Test Material Code # 202331

Issue Date : 12/31/2023

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	7	7	5.147	1.535	1.512	0.3713	1.557	29.38%	7.21%	30.26%	4.194
539.43	Nickel, ICP, Microwave (ppm)	5	5	3.519	0.6391	0.6387	0.0298	0.6394	18.15%	0.85%	18.17%	21.42

Notes: Precision Calculations provided for methods with 5 or more labs contributing to calculations.