

Animal Feed Scheme
Beef Feed, Medicated
Test Material Code # 202123

Method Summary Report
(Precision Report Follows)

Labs Reporting: 175
Methods Reported: 415
Issue Date : 04/30/2021

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 (R-bar)	Thompson Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	1	1	0.1500							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	46	45	10.18	0.2888	10.21	0.2336	0.0435	2.29%	0.0920	2.82%
001.99	Loss on Drying, Miscellaneous (%)	21	20	9.836	0.7596	9.943	0.5970	0.1669	6.00%	0.1286	2.83%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	5	5	10.14	0.2265	10.14	0.2265	0.1013	2.24%	0.0736	2.82%
001.03	Loss on Drying, Low temp. methods (%)	2	2	10.40	0.1450						
001.05	Loss on Drying, LECO (%)	1	1	10.23							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	114	111	14.75	0.2961	14.73	0.2698	0.0320	1.83%	0.1456	2.61%
002.05	Protein, Crude, Copper, Boric Acid (%)	24	24	14.56	0.3084	14.58	0.1737	0.0443	1.19%	0.1081	2.62%
002.01	Protein, Crude, Auto Kjeh-Foss (%)	17	17	14.63	0.1950	14.62	0.2009	0.0609	1.37%	0.0641	2.62%
002.11	Protein, Crude, NIR (%)	5	5	15.13	0.9389	15.13	0.9389	0.4199	6.21%	0.0480	2.57%
002.00	Protein, Crude, Crude (%)	2	2	14.69	0.0884						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	2	2	14.79	0.0691						
002.04	Protein, Crude, Copper Catalyst (%)	2	2	14.66	0.0566						
002.08	Protein, Crude, Cu/Ti (%)	2	2	14.72	0.0340						
003.14	Fat, Crude, Ankom (%)	55	54	3.183	0.3433	3.208	0.2973	0.0506	9.27%	0.1258	3.36%
003.10	Fat, Crude, Randall, Pet Ether (%)	29	28	3.311	0.1950	3.296	0.1812	0.0428	5.50%	0.0913	3.34%
003.06	Fat, Crude, Pet Ether (%)	16	15	3.447	0.2566	3.459	0.1502	0.0485	4.34%	0.0603	3.32%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	12	12	3.357	0.1903	3.369	0.1867	0.0674	5.54%	0.0789	3.33%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	11	11	3.402	0.2422	3.385	0.2322	0.0875	6.86%	0.1538	3.33%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	7	7	3.343	0.0917	3.344	0.1021	0.0482	3.05%	0.1188	3.34%
003.11	Fat, Crude, NIR (%)	5	4	3.624	0.5717	3.624	0.5717	0.2858	15.78%	0.0225	3.30%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	3	3	3.137	0.6304	3.137	0.6304	0.4458	20.10%	0.0431	3.37%
003.12	Fat, Crude, Hexane Ext (%)	3	3	3.218	0.2646	3.218	0.2646	0.1871	8.22%	0.1700	3.35%
003.99	Fat, Crude, Miscellaneous (%)	3	3	3.642	0.2403	3.642	0.2403	0.1387	6.60%	0.0700	3.29%
004.07	Fiber, Crude, ANKOM (%)	72	71	3.492	0.4198	3.485	0.3764	0.0558	10.80%	0.1151	3.31%
004.06	Fiber, Crude, Fibertec (%)	21	21	3.640	0.3373	3.631	0.3195	0.0871	8.80%	0.1335	3.29%
004.00	Fiber, Crude, Asbestos Free (%)	16	15	3.581	0.3007	3.600	0.2633	0.0850	7.31%	0.1053	3.30%
004.03	Fiber, Crude, Fritted Glass (%)	4	4	3.793	0.6459	3.793	0.6459	0.3230	17.03%	0.2100	3.27%
004.11	Fiber, Crude, NIR (%)	4	4	3.491	1.525	3.491	1.525	0.7625	43.68%	0.1375	3.31%

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004.01	Fiber, Crude, Sing Filt (%)	1	1	3.470							
005.00	Ash, 2h @ 600°C (%)	92	90	6.262	0.2353	6.260	0.2507	0.0330	4.01%	0.0824	3.03%
005.05	Ash, 3h @ 550°C (%)	26	25	6.523	0.2240	6.533	0.2310	0.0578	3.54%	0.0500	3.02%
005.99	Ash, Miscellaneous (%)	9	9	6.365	0.5513	6.461	0.3633	0.1514	5.62%	0.0546	3.02%
005.11	Ash, NIR (%)	4	4	6.541	1.991	6.541	1.991	0.9953	30.43%	0.0375	3.01%
005.02	Ash, LECO (%)	1	1	6.064							
005.03	Ash, Microwave furnace (%)	1	1	6.200							
006.00	Total Sugars, As sucrose (%)	3	3	5.255	0.4648	5.255	0.4648	0.2684	8.85%	0.1433	3.12%
006.99	Total Sugars, Miscellaneous (%)	3	3	6.402	1.003	6.402	1.003	0.5789	15.66%	0.1100	3.02%
006.03	Total Sugars, Invert w/o Invrns (%)	1	1	5.350							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	45	44	5.165	0.4722	5.176	0.4237	0.0798	8.19%	0.1452	3.12%
008.02	Fiber, Acid Detergent, Crucible (%)	11	11	5.243	0.7348	5.264	0.6626	0.2497	12.59%	0.1534	3.12%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	4	4	5.740	0.9493	5.740	0.9493	0.4747	16.54%	0.1900	3.07%
008.05	Fiber, Acid Detergent, Acid Detergent-Hach (%)	1	1	6.370							
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	44	43	12.72	1.039	12.58	0.6889	0.1313	5.48%	0.2044	2.73%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	13.75	1.460	13.75	1.655	0.6543	12.04%	0.2086	2.70%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	4	3	13.97	0.4071	13.97	0.4071	0.2351	2.91%	0.3867	2.68%
009.04	Fiber, Neutral Detergent, Neutral Det-No ENZ Pretreat (%)	1	1	11.93							
010.99	Moisture, Miscellaneous (%)	13	13	10.11	0.3714	10.13	0.3051	0.1058	3.01%	0.0569	2.82%
010.11	Moisture, NIR (%)	3	3	9.918	0.3197	9.918	0.3197	0.1846	3.22%	0.0500	2.83%
010.03	Moisture, Karl-Fischer (%)	2	2	10.06	0.2687						
011.01	Loss on Drying, HT, 135°C 2hr (%)	68	67	10.92	0.4015	10.96	0.2885	0.0441	2.63%	0.0854	2.79%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	3	3	10.09	1.306	10.09	1.306	0.9237	12.95%	1.188	2.82%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	2	2	11.06	0.1591						
012.00	Starch, Polarimetric (Ewers) (%)	12	12	43.10	0.7141	43.14	0.7289	0.2630	1.69%	0.3283	1.52%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	10	42.31	4.071	42.03	3.947	1.560	9.39%	1.570	1.54%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	5	5	41.64	1.135	41.64	1.135	0.5078	2.73%	1.330	1.55%
012.11	Starch, NIR (%)	4	4	42.14	3.731	42.14	3.731	1.865	8.85%	0.1900	1.54%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	39.58	1.877						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	21.94							
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	22	21	4.127	0.4158	4.089	0.3795	0.1035	9.28%	0.1249	3.24%
013.02	Fat, Acid Pretreat, Mojonniier, Bak Ext (%)	17	17	4.613	0.4618	4.578	0.4329	0.1312	9.46%	0.2149	3.18%
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	10	10	4.540	0.6550	4.514	0.6827	0.2699	15.13%	0.3135	3.19%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	6	6	3.999	0.2353	3.999	0.2668	0.1362	6.67%	0.1185	3.25%
013.08	Fat, Base Pretreat, Roese-Gottlieb Modified (%)	1	1	2.950							
015.43	Aluminum, ICP, Microwave (ppm)	8	8	72.30	25.64	78.07	13.05	5.767	16.72%	3.585	8.30%
015.41	Aluminum, ICP, Dry ash (ppm)	5	5	71.00	13.30	71.00	13.30	5.946	18.73%	1.693	8.42%
015.53	Aluminum, ICP-MS, Microwave (ppm)	3	3	86.63	5.413	86.63	5.413	3.125	6.25%	4.739	8.17%
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	49.88	7.046						
015.52	Aluminum, ICP-MS, Open vessel (ppm)	1	1	97.20							

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017.42	Boron, ICP, Open vessel (ppm)	6	6	6.161	0.3020	6.161	0.3425	0.1748	5.56%	0.4845	12.17%
017.43	Boron, ICP, Microwave (ppm)	7	5	6.466	0.3499	6.466	0.3499	0.1956	5.41%	0.1991	12.08%
017.41	Boron, ICP, Dry ash (ppm)	5	4	6.541	0.5365	6.541	0.5365	0.3098	8.20%	0.2090	12.06%
017.53	Boron, ICP-MS, Microwave (ppm)	2	2	6.545	0.4815						
017.52	Boron, ICP-MS, Open vessel (ppm)	1	1	6.046							
019.43	Calcium, ICP, Microwave (%)	31	29	1.274	0.0726	1.268	0.0469	0.0109	3.70%	0.0213	3.86%
019.41	Calcium, ICP, Dry ash (%)	23	23	1.246	0.0473	1.249	0.0433	0.0113	3.47%	0.0262	3.87%
019.42	Calcium, ICP, Open vessel (%)	18	18	1.259	0.1036	1.260	0.1140	0.0336	9.04%	0.0539	3.86%
019.31	Calcium, AAS, Dry ash (%)	18	17	1.220	0.0550	1.220	0.0607	0.0184	4.97%	0.0361	3.88%
019.08	Calcium, EDTA (%)	10	9	1.175	0.2326	1.192	0.2233	0.0930	18.73%	0.0088	3.90%
019.00	Calcium, Ox-Mn04 Vol. (%)	7	7	1.256	0.0874	1.248	0.0790	0.0373	6.33%	0.0316	3.87%
019.52	Calcium, ICP-MS, Open vessel (%)	5	5	1.304	0.0953	1.304	0.0953	0.0426	7.30%	0.0853	3.84%
019.53	Calcium, ICP-MS, Microwave (%)	5	5	1.255	0.0623	1.255	0.0623	0.0279	4.96%	0.0323	3.87%
019.99	Calcium, Miscellaneous (%)	3	3	1.222	0.0708	1.222	0.0708	0.0409	5.79%	0.0233	3.88%
019.02	Calcium, Hach Method (%)	1	1	1.040							
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	1.339							
019.09	Calcium, Ion-selective electrode (%)	1	1	1.107							
019.32	Calcium, AAS, Open vessel (%)	1	1	1.175							
019.33	Calcium, AAS, Microwave (%)	1	1	1.335							
019.44	Calcium, ICP, Dry ash (%)	1	1	1.215							
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	1.215							
021.43	Cobalt, ICP, Microwave (ppm)	9	9	2.284	0.9871	2.042	0.3986	0.1661	19.52%	0.2945	14.37%
021.53	Cobalt, ICP-MS, Microwave (ppm)	7	7	2.015	0.2035	2.008	0.2136	0.1009	10.64%	0.2138	14.40%
021.41	Cobalt, ICP, Dry ash (ppm)	5	4	1.756	0.3861	1.756	0.3861	0.1931	21.99%	0.0989	14.70%
021.52	Cobalt, ICP-MS, Open vessel (ppm)	4	4	1.970	0.2655	1.970	0.2655	0.1328	13.48%	0.0796	14.44%
021.31	Cobalt, AAS, Dry ash (ppm)	2	2	2.255	0.4313						
021.42	Cobalt, ICP, Open vessel (ppm)	2	2	1.950	0.4462						
022.43	Copper, ICP, Microwave (ppm)	28	27	49.59	4.651	49.09	3.896	0.9373	7.94%	1.014	8.90%
022.42	Copper, ICP, Open vessel (ppm)	19	18	48.20	3.053	48.39	2.992	0.8814	6.18%	1.004	8.92%
022.41	Copper, ICP, Dry ash (ppm)	16	16	46.08	2.334	45.99	2.438	0.7617	5.30%	1.734	8.99%
022.31	Copper, AAS, Dry ash (ppm)	12	12	47.45	5.865	47.18	6.014	2.170	12.75%	1.721	8.96%
022.53	Copper, ICP-MS, Microwave (ppm)	6	6	47.28	3.726	47.01	3.575	1.824	7.60%	3.298	8.96%
022.52	Copper, ICP-MS, Open vessel (ppm)	4	4	49.53	3.081	49.53	3.081	1.541	6.22%	4.084	8.89%
022.33	Copper, AAS, Microwave (ppm)	3	3	47.48	0.5824	47.48	0.5824	0.3362	1.23%	0.3033	8.95%
022.44	Copper, ICP, Dry ash (ppm)	2	2	47.98	1.390						
022.99	Copper, Miscellaneous (ppm)	2	2	45.25	0.3536						
022.32	Copper, AAS, Open vessel (ppm)	1	1	48.50							
025.43	Iron, ICP, Microwave (ppm)	28	27	229.3	39.52	233.9	17.49	4.207	7.48%	7.905	7.04%
025.41	Iron, ICP, Dry ash (ppm)	19	19	221.2	14.97	222.3	14.09	4.041	6.34%	5.758	7.09%
025.42	Iron, ICP, Open vessel (ppm)	15	15	222.8	16.33	223.8	16.34	5.273	7.30%	8.075	7.09%

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025.31	Iron, AAS, Dry ash (ppm)	11	11	234.8	26.07	236.4	23.60	8.894	9.98%	5.427	7.03%
025.53	Iron, ICP-MS, Microwave (ppm)	4	4	224.1	5.181	224.1	5.181	2.591	2.31%	5.056	7.08%
025.52	Iron, ICP-MS, Open vessel (ppm)	2	2	215.5	21.75						
025.99	Iron, Miscellaneous (ppm)	2	2	224.0	9.900						
025.33	Iron, AAS, Microwave (ppm)	1	1	245.7							
027.43	Magnesium, ICP, Microwave (%)	23	23	0.2630	0.0193	0.2613	0.0140	0.0036	5.35%	0.0088	4.90%
027.41	Magnesium, ICP, Dry ash (%)	16	16	0.2574	0.0091	0.2574	0.0103	0.0032	3.99%	0.0084	4.91%
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.2618	0.0139	0.2630	0.0129	0.0040	4.90%	0.0077	4.89%
027.31	Magnesium, AAS, Dry ash (%)	7	7	0.2642	0.0107	0.2642	0.0121	0.0057	4.59%	0.0038	4.89%
027.53	Magnesium, ICP-MS, Microwave (%)	5	5	0.2642	0.0083	0.2642	0.0083	0.0037	3.15%	0.0086	4.89%
027.52	Magnesium, ICP-MS, Open vessel (%)	4	4	0.2727	0.0123	0.2727	0.0123	0.0061	4.50%	0.0230	4.86%
027.99	Magnesium, Miscellaneous (%)	3	3	0.2567	0.0176	0.2567	0.0176	0.0101	6.84%	0.0067	4.91%
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.2250							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.2735							
027.44	Magnesium, ICP, Dry ash (%)	1	1	0.2560							
028.43	Manganese, ICP, Microwave (ppm)	26	26	148.9	8.544	148.9	7.005	1.717	4.70%	3.843	7.53%
028.42	Manganese, ICP, Open vessel (ppm)	19	18	151.1	10.43	151.0	11.51	3.391	7.62%	4.607	7.52%
028.41	Manganese, ICP, Dry ash (ppm)	16	16	138.7	14.88	139.7	14.42	4.506	10.32%	4.109	7.61%
028.31	Manganese, AAS, Dry ash (ppm)	12	11	144.3	8.877	144.3	10.07	3.794	6.98%	1.626	7.57%
028.53	Manganese, ICP-MS, Microwave (ppm)	6	6	149.1	9.701	149.1	11.00	5.614	7.38%	3.603	7.53%
028.52	Manganese, ICP-MS, Open vessel (ppm)	4	4	159.3	7.727	159.3	7.727	3.864	4.85%	12.53	7.46%
028.33	Manganese, AAS, Microwave (ppm)	2	2	164.8	26.85						
028.44	Manganese, ICP, Dry ash (ppm)	2	2	136.5	14.85						
028.99	Manganese, Miscellaneous (ppm)	2	2	150.3	8.132						
028.32	Manganese, AAS, Open vessel (ppm)	1	1	151.0							
031.01	Phosphorus, Photometric (%)	34	33	0.5904	0.0236	0.5919	0.0203	0.0044	3.43%	0.0109	4.33%
031.43	Phosphorus, ICP, Microwave (%)	30	28	0.6138	0.0353	0.6126	0.0268	0.0063	4.37%	0.0114	4.31%
031.41	Phosphorus, ICP, Dry ash (%)	22	22	0.5959	0.0196	0.5943	0.0183	0.0049	3.07%	0.0134	4.33%
031.42	Phosphorus, ICP, Open vessel (%)	20	20	0.5874	0.0345	0.5902	0.0299	0.0084	5.07%	0.0204	4.33%
031.53	Phosphorus, ICP-MS, Microwave (%)	5	4	0.6076	0.0402	0.6076	0.0402	0.0201	6.62%	0.0083	4.31%
031.03	Phosphorus, Autoanalyzer (%)	3	3	0.6083	0.0110	0.6083	0.0110	0.0078	1.81%	0.0076	4.31%
031.52	Phosphorus, ICP-MS, Open vessel (%)	3	3	0.6095	0.0060	0.6095	0.0060	0.0035	0.98%	0.0320	4.31%
031.99	Phosphorus, Miscellaneous (%)	3	3	0.5433	0.0653	0.5433	0.0653	0.0377	12.01%	0.0133	4.38%
031.44	Phosphorus, ICP, Dry ash (%)	2	2	0.5808	0.0060						
031.06	Phosphorus, Hach Method (%)	1	1	0.5650							
031.51	Phosphorus, ICP-MS, Dry ash (%)	1	1	0.6150							
032.43	Potassium, ICP, Microwave (%)	28	27	0.8467	0.0365	0.8477	0.0373	0.0090	4.40%	0.0196	4.10%
032.41	Potassium, ICP, Dry ash (%)	20	19	0.8170	0.0487	0.8214	0.0429	0.0123	5.23%	0.0156	4.12%
032.42	Potassium, ICP, Open vessel (%)	18	17	0.8491	0.0387	0.8520	0.0373	0.0113	4.38%	0.0155	4.10%
032.31	Potassium, AAS, Dry ash (%)	12	11	0.8183	0.0575	0.8223	0.0556	0.0210	6.76%	0.0100	4.12%

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032.52	Potassium, ICP-MS, Open vessel (%)	5	5	0.8726	0.0602	0.8726	0.0602	0.0269	6.90%	0.0423	4.08%
032.53	Potassium, ICP-MS, Microwave (%)	5	4	0.8802	0.0855	0.8802	0.0855	0.0428	9.72%	0.0110	4.08%
032.99	Potassium, Miscellaneous (%)	4	4	0.8464	0.0256	0.8464	0.0256	0.0128	3.03%	0.0103	4.10%
032.32	Potassium, AAS, Open vessel (%)	1	1	0.7500							
032.44	Potassium, ICP, Dry ash (%)	1	1	0.8395							
032.51	Potassium, ICP-MS, Dry ash (%)	1	1	0.9050							
033.01	Salt as chloride, Poten Cl (%)	28	27	1.044	0.0309	1.045	0.0305	0.0073	2.92%	0.0086	3.97%
033.00	Salt as chloride, Sol Cl (%)	19	19	1.010	0.1212	1.030	0.0474	0.0136	4.61%	0.0268	3.98%
033.99	Salt, Miscellaneous (%)	10	9	0.9244	0.2000	0.9619	0.1231	0.0513	12.80%	0.0171	4.02%
033.03	Salt as chloride, Quantab (%)	4	4	1.073	0.0827	1.073	0.0827	0.0414	7.71%	0.0450	3.96%
033.05	Salt as chloride, Ion Sel Electrode (%)	1	1	1.035							
034.53	Selenium, ICP-MS, Microwave (ppm)	10	10	1.282	0.1343	1.282	0.1523	0.0602	11.87%	0.0965	15.41%
034.04	Selenium, AA, Hydride (ppm)	5	5	1.195	0.1233	1.195	0.1233	0.0551	10.31%	0.0448	15.57%
034.52	Selenium, ICP-MS, Open vessel (ppm)	4	4	1.283	0.2020	1.283	0.2020	0.1010	15.75%	0.0759	15.41%
034.41	Selenium, ICP, Dry ash (ppm)	2	2	1.080	0.1131						
034.01	Selenium, Fluor (ppm)	1	1	1.313							
034.43	Selenium, ICP, Microwave (ppm)	2	1	1.269							
034.99	Selenium, Miscellaneous (ppm)	1	1	1.785							
034.42	Selenium, ICP, Open vessel (ppm)	1		20.00							
035.43	Sodium, ICP, Microwave (%)	25	24	0.3349	0.0146	0.3339	0.0134	0.0034	4.02%	0.0102	4.72%
035.41	Sodium, ICP, Dry ash (%)	22	22	0.3287	0.0226	0.3272	0.0104	0.0028	3.18%	0.0097	4.73%
035.42	Sodium, ICP, Open vessel (%)	17	17	0.3314	0.0173	0.3310	0.0129	0.0039	3.91%	0.0079	4.72%
035.31	Sodium, AAS, Dry ash (%)	12	12	0.3251	0.0163	0.3248	0.0177	0.0064	5.44%	0.0126	4.74%
035.53	Sodium, ICP-MS, Microwave (%)	5	5	0.3325	0.0118	0.3325	0.0118	0.0053	3.56%	0.0142	4.72%
035.52	Sodium, ICP-MS, Open vessel (%)	4	4	0.3580	0.0080	0.3580	0.0080	0.0040	2.22%	0.0251	4.67%
035.99	Sodium, Miscellaneous (%)	3	3	0.2400	0.1389	0.2400	0.1389	0.0982	57.88%	0.0067	4.96%
035.05	Sodium, Flame Emission (%)	1	1	0.3500							
035.32	Sodium, AAS, Open vessel (%)	1	1	0.2700							
035.51	Sodium, ICP-MS, Dry ash (%)	1	1	0.3300							
036.42	Sulfur, ICP, Open vessel (%)	20	20	0.2517	0.0266	0.2478	0.0184	0.0052	7.44%	0.0103	4.93%
036.43	Sulfur, ICP, Microwave (%)	16	15	0.2607	0.0172	0.2593	0.0136	0.0044	5.23%	0.0066	4.90%
036.04	Sulfur, LECO (%)	4	3	0.2458	0.0113	0.2458	0.0113	0.0065	4.58%	0.0083	4.94%
036.52	Sulfur, ICP-MS, Open vessel (%)	2	2	0.2853	0.0419						
036.99	Sulfur, Miscellaneous (%)	2	2	0.2225	0.0035						
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.2450							
037.43	Zinc, ICP, Microwave (ppm)	27	25	179.6	10.43	180.0	10.28	2.569	5.71%	3.021	7.32%
037.42	Zinc, ICP, Open vessel (ppm)	18	18	176.9	11.72	176.5	12.31	3.626	6.97%	5.652	7.34%
037.41	Zinc, ICP, Dry ash (ppm)	17	17	178.3	9.643	177.6	9.210	2.792	5.19%	4.771	7.34%
037.31	Zinc, AAS, Dry ash (ppm)	11	11	178.5	7.719	178.1	8.033	3.027	4.51%	2.702	7.33%
037.53	Zinc, ICP-MS, Microwave (ppm)	5	5	179.0	5.511	179.0	5.511	2.465	3.08%	5.331	7.33%

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037.52	Zinc, ICP-MS, Open vessel (ppm)	4	4	181.8	5.399	181.8	5.399	2.699	2.97%	7.871	7.31%
037.33	Zinc, AAS, Microwave (ppm)	4	3	177.8	5.639	177.8	5.639	3.987	3.17%	3.993	7.34%
037.99	Zinc, Miscellaneous (ppm)	3	3	180.2	12.51	180.2	12.51	7.223	6.94%	6.557	7.32%
037.44	Zinc, ICP, Dry ash (ppm)	2	2	161.6	16.91						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	179.3							
038.43	Molybdenum, ICP, Microwave (ppm)	8	7	1.856	0.1944	1.856	0.2204	0.1041	11.87%	0.0303	14.57%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	5	5	2.125	0.1037	2.125	0.1037	0.0464	4.88%	0.1134	14.28%
038.42	Molybdenum, ICP, Open vessel (ppm)	5	4	2.290	0.3590	2.290	0.3590	0.1795	15.68%	0.1624	14.12%
038.41	Molybdenum, ICP, Dry ash (ppm)	3	3	1.831	0.2205	1.831	0.2205	0.1273	12.04%	0.0545	14.60%
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	2	2	2.074	0.2390						
040.52	Barium, ICP-MS, Open vessel (ppm)	2	2	3.983	0.1945						
040.53	Barium, ICP-MS, Microwave (ppm)	2	2	3.829	0.1479						
041.53	Vanadium, ICP-MS, Microwave (ppm)	2	2	0.7722	0.0101						
042.00	Chloride, Titrimetric (%)	3	3	0.6243	0.0361	0.6243	0.0361	0.0256	5.79%	0.0060	4.29%
042.99	Chloride, Miscellaneous (%)	2	2	0.6625	0.0813						
101.99	Choline Chloride, Miscellaneous (ppm)	1	1	1,570							
102.02	Niacin, LC (ppm)	2	2	12.00	5.586						
102.01	Niacin, Microbiological (ppm)	1	1	51.65							
102.99	Niacin, Miscellaneous (ppm)	1	1	10.15							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	7.715							
103.02	Pantothenic Acid, LC (ppm)	1	1	7.600							
103.99	Pantothenic Acid, Miscellaneous (ppm)	1	1	14.75							
104.00	Riboflavin, Fluorometric (ppm)	2	2	9.910	7.764						
104.03	Riboflavin, LC (ppm)	2	2	1.612	0.1584						
104.99	Riboflavin, Miscellaneous (ppm)	1	1	0.8600							
105.01	Thiamine, Fluorometer (ppm)	1	1	3.840							
106.02	Vitamin A, LC (KU / kg)	16	15	14.34	5.573	13.44	3.657	1.180	27.22%	1.748	
106.99	Vitamin A, Miscellaneous (KU / kg)	2	2	12.97	4.077						
106.00	Vitamin A, Color (KU / kg)	1	1	14.80							
106.01	Vitamin A, UV (KU / kg)	1	1	18.65							
107.00	Vitamin B12, Microbiological (ppb)	1	1	6.405							
107.99	Vitamin B12, Miscellaneous (ppb)	1	1	88.50							
108.02	Vitamin D3, LC (KU / kg)	4	4	5.428	1.046	5.428	1.046	0.5228	19.26%	0.7750	
108.99	Vitamin D3, Miscellaneous (KU / kg)	2	2	3.578	0.5339						
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	3.500							
109.02	Vitamin E, LC (IU / kg)	15	15	94.14	13.82	93.50	10.70	3.454	11.44%	2.328	
109.99	Vitamin E, Miscellaneous (IU / kg)	1	1	49.00							
111.00	Vitamin C, Phosphorylated, LC (ppm)	1		4.400							
112.01	Pyridoxine, LC (µg / g)	1	1	3.530							
113.02	Folic acid, LC (ppm)	1	1	0.7235							

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114.01	Biotin, Microbiological (ppm)	1	1	0.2190							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	1	1	0.4000							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	6.095							
120.00	Alanine, Post-col Ninhydrin Der (%)	16	16	0.8005	0.0523	0.8039	0.0227	0.0071	2.82%	0.0136	4.13%
120.05	Alanine, Pre-col AQC Der (%)	7	6	0.8460	0.1167	0.8019	0.0115	0.0059	1.43%	0.0080	4.13%
120.99	Alanine, Miscellaneous (%)	3	3	0.7300	0.0868	0.7300	0.0868	0.0501	11.88%	0.0067	4.19%
120.02	Alanine, Post-col OPA Der (%)	1	1	0.8055							
121.00	Arginine, Post-col Ninhydrin Der (%)	16	15	0.8415	0.0387	0.8415	0.0438	0.0141	5.21%	0.0109	4.10%
121.05	Arginine, Pre-col AQC Der (%)	7	7	1.339	1.267	0.8792	0.0583	0.0275	6.63%	0.0219	4.08%
121.99	Arginine, Miscellaneous (%)	2	2	0.8075	0.0530						
121.02	Arginine, Post-col OPA Der (%)	1	1	0.8265							
122.00	Aspartic, Post-col Ninhydrin Der (%)	16	16	1.208	0.0552	1.209	0.0438	0.0137	3.62%	0.0211	3.89%
122.05	Aspartic, Pre-col AQC Der (%)	7	7	2.047	1.971	1.353	0.1990	0.0940	14.71%	0.0233	3.82%
122.99	Aspartic, Miscellaneous (%)	3	3	1.047	0.2400	1.047	0.2400	0.1386	22.93%	0.0267	3.97%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.203							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	16	16	0.2557	0.0245	0.2565	0.0232	0.0073	9.06%	0.0056	4.91%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	5	5	0.2257	0.0237	0.2257	0.0237	0.0106	10.50%	0.0142	5.00%
124.99	Cysteine/Cystine, Miscellaneous (%)	3	3	0.2150	0.0087	0.2150	0.0087	0.0061	4.03%	0.0033	5.04%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.2725							
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	16	2.516	0.1369	2.507	0.1149	0.0359	4.58%	0.0355	3.48%
125.05	Glutamic, Pre-col AQC Der (%)	7	7	3.576	2.682	2.663	0.3900	0.1843	14.64%	0.0287	3.45%
125.99	Glutamic, Miscellaneous (%)	3	3	2.140	0.4650	2.140	0.4650	0.2684	21.73%	0.0267	3.57%
125.02	Glutamic, Post-col OPA Der (%)	1	1	2.452							
126.00	Glycine, Post-col Ninhydrin Der (%)	16	16	0.6261	0.0299	0.6263	0.0292	0.0091	4.65%	0.0123	4.29%
126.05	Glycine, Pre-col AQC Der (%)	7	7	1.176	1.425	0.6667	0.1165	0.0551	17.48%	0.0130	4.25%
126.99	Glycine, Miscellaneous (%)	3	3	0.5367	0.1318	0.5367	0.1318	0.0761	24.55%	0.0067	4.39%
126.02	Glycine, Post-col OPA Der (%)	1	1	0.6315							
127.00	Histidine, Post-col Ninhydrin Der (%)	16	16	0.3711	0.0201	0.3713	0.0225	0.0070	6.05%	0.0073	4.64%
127.05	Histidine, Pre-col AQC Der (%)	7	7	0.5936	0.4911	0.4497	0.1543	0.0729	34.31%	0.0151	4.51%
127.99	Histidine, Miscellaneous (%)	3	3	0.3467	0.0708	0.3467	0.0708	0.0409	20.41%	0.0067	4.69%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.3740							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	16	0.5150	0.0437	0.5156	0.0483	0.0151	9.37%	0.0129	4.42%
128.05	Isoleucine, Pre-col AQC Der (%)	7	7	0.8254	0.9248	0.5155	0.1518	0.0717	29.45%	0.0103	4.42%
128.99	Isoleucine, Miscellaneous (%)	3	3	0.4600	0.1040	0.4600	0.1040	0.0601	22.62%	0.0133	4.50%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.5260							
129.00	Leucine, Post-col Ninhydrin Der (%)	16	16	1.219	0.0591	1.225	0.0402	0.0126	3.28%	0.0184	3.88%
129.05	Leucine, Pre-col AQC Der (%)	7	7	1.712	1.512	1.192	0.2026	0.0957	16.99%	0.0179	3.90%
129.99	Leucine, Miscellaneous (%)	3	3	1.132	0.2958	1.132	0.2958	0.1708	26.14%	0.0100	3.93%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.232							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	16	16	0.6308	0.0292	0.6308	0.0331	0.0103	5.24%	0.0106	4.29%

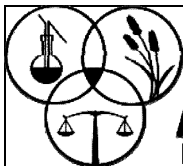
Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz % _{RSD}
130.05	L-Lysine, Pre-col AQC Der (%)	7	6	0.6785	0.0530	0.6785	0.0601	0.0307	8.86%	0.0050	4.24%
130.99	L-Lysine, Miscellaneous (%)	3	3	0.5250	0.1532	0.5250	0.1532	0.0885	29.18%	0.0100	4.41%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.6585							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	16	16	0.2249	0.0246	0.2270	0.0138	0.0043	6.08%	0.0065	5.00%
131.05	Methionine, PAO Pre-col AQC Der (%)	6	6	0.5555	0.8513	0.2351	0.0891	0.0455	37.90%	0.0183	4.97%
131.99	Methionine, Miscellaneous (%)	3	3	0.2100	0.0854	0.2100	0.0854			0.0000	5.06%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.2225							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	16	0.6483	0.0529	0.6508	0.0501	0.0157	7.70%	0.0142	4.27%
132.05	Phenylalanine, Pre-col AQC Der (%)	7	7	0.8874	0.8403	0.6426	0.1431	0.0676	22.27%	0.0117	4.27%
132.99	Phenylalanine, Miscellaneous (%)	3	3	0.5783	0.1504	0.5783	0.1504	0.0869	26.01%	0.0100	4.34%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.6390							
133.00	Proline, Post-col Ninhydrin Der (%)	16	16	0.9658	0.1102	0.9426	0.0648	0.0202	6.87%	0.0175	4.04%
133.05	Proline, Pre-col AQC Der (%)	7	7	1.297	0.7512	1.089	0.2790	0.1318	25.61%	0.0134	3.95%
133.99	Proline, Miscellaneous (%)	3	3	0.8333	0.1314	0.8333	0.1314	0.0758	15.76%	0.0133	4.11%
134.00	Serine, Post-col Ninhydrin Der (%)	16	16	0.6590	0.0481	0.6587	0.0435	0.0136	6.60%	0.0172	4.26%
134.05	Serine, Pre-col AQC Der (%)	7	7	1.003	0.8681	0.6965	0.0847	0.0400	12.17%	0.0224	4.22%
134.99	Serine, Miscellaneous (%)	3	3	0.5967	0.0993	0.5967	0.0993	0.0573	16.64%	0.0067	4.32%
134.02	Serine, Post-col OPA Der (%)	1	1	0.5475							
135.00	Threonine, Post-col Ninhydrin Der (%)	16	16	0.5218	0.0242	0.5236	0.0226	0.0071	4.32%	0.0107	4.41%
135.05	Threonine, Pre-col AQC Der (%)	7	7	0.8814	0.9510	0.5490	0.1055	0.0498	19.21%	0.0099	4.38%
135.99	Threonine, Miscellaneous (%)	3	3	0.4483	0.0825	0.4483	0.0825	0.0583	18.40%	0.0033	4.51%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.5050							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	6	6	0.1887	0.0736	0.1698	0.0345	0.0176	20.30%	0.0105	5.22%
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	3	3	0.1751	0.0129	0.1751	0.0129			0.0010	5.20%
136.05	Tryptophan, Pre-col AQC Der (%)	2	2	0.1678	0.0251						
136.99	Tryptophan, Miscellaneous (%)	2	2	0.2600	0.1697						
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	1	1	0.1655							
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.1590							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	12	0.4342	0.0492	0.4356	0.0527	0.0190	12.11%	0.0067	4.53%
137.05	Tyrosine, Pre-col AQC Der (%)	7	6	0.5198	0.0746	0.5198	0.0845	0.0431	16.26%	0.0093	4.41%
137.99	Tyrosine, Miscellaneous (%)	3	3	0.3633	0.0569	0.3633	0.0569			0.0000	4.66%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.4105							
138.00	Valine, Post-col Ninhydrin Der (%)	16	16	0.6542	0.0372	0.6553	0.0395	0.0123	6.02%	0.0120	4.26%
138.05	Valine, Pre-col AQC Der (%)	7	7	1.057	1.048	0.7411	0.2986	0.1411	40.29%	0.0111	4.18%
138.99	Valine, Miscellaneous (%)	3	3	0.6117	0.1020	0.6117	0.1020			0.0000	4.31%
138.02	Valine, Post-col OPA Der (%)	1	1	0.6855							
139.00	Taurine, Post-col Ninhydrin Der (%)	3	3	0.0885	0.0709	0.0885	0.0709	0.0501	80.07%	0.0043	5.76%
139.05	Taurine, Pre-col AQC Der (%)	1	1	0.0010							
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
139.99	Taurine, Miscellaneous (%)	1		0.0100							

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150.00	Phytase, Colorimetric (Units / kg)	2	2	41.23	18.07						
160.99	Fructose, Miscellaneous (%)	2	2	0.3223	0.0180						
160.10	Fructose, HPAEC PAD (%)	1	1	0.2705							
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.10	Glucose, HPAEC PAD (%)	1	1	0.1805							
162.99	Glucose, Miscellaneous (%)	2	1	0.1700							
163.10	Lactose, HPAEC PAD (%)	1		0.0000							
163.99	Lactose, Miscellaneous (%)	2		0.0000							
164.10	Maltose, HPAEC PAD (%)	1	1	0.2280							
164.99	Maltose, Miscellaneous (%)	1		0.1500							
165.99	Sucrose, Miscellaneous (%)	2	2	3.325	0.4101						
165.10	Sucrose, HPAEC PAD (%)	1	1	2.945							
166.99	Raffinose, Miscellaneous (%)	2	2	0.4765	0.0050						
166.10	Raffinose, HPAEC PAD (%)	1	1	0.5525							
167.99	Stachyose, Miscellaneous (%)	2	2	0.4930	0.0255						
167.10	Stachyose, HPAEC PAD (%)	1	1	0.5855							
351.05	Chlortetracycline, LC-MS/MS (ppm)	3	2	0.7156	0.1936	0.7156	0.1936			0.1191	16.82%
351.00	Chlortetracycline, Plate (ppm)	1		2.000							
354.04	Decoquinatate, LC-MS/MS (ppm)	3	3	0.4050	0.2211	0.4050	0.2211	0.1277	54.60%	0.0233	18.33%
354.01	Decoquinatate, LC (UV or FL) (ppm)	2	2	0.6155	0.1195						
361.05	Lasalocid Sodium, LC-MS/MS (ppm)	6	6	0.8835	0.6797	0.7523	0.4404	0.2247	58.54%	0.1043	16.70%
361.02	Lasalocid Sodium, LC (ppm)	1	1	0.5870							
361.03	Lasalocid Sodium, LC (UV or FL) (ppm)	1	1	0.8050							
365.05	Monensin, LC-MS/MS (ppm)	12	12	18.25	3.288	17.87	2.731	0.9854	15.28%	1.410	10.37%
365.03	Monensin, LC-PCD (ppm)	5	5	16.71	0.6510	16.71	0.6510	0.2911	3.90%	0.9720	10.47%
365.02	Monensin, LC (ppm)	4	4	14.91	1.442	14.91	1.442	0.7210	9.67%	0.6250	10.65%
365.04	Monensin, LC-MS (ppm)	2	2	16.53	1.520						
365.99	Monensin, Miscellaneous (ppm)	2	2	16.73	0.0955						
365.00	Monensin, Plate (ppm)	1	1	20.26							
379.05	Salinomycin, LC-MS/MS (ppm)	1		0.2500							
382.04	Sulfamethazine, LC-MS/MS (ppm)	2	2	0.9913	0.0491						
382.02	Sulfamethazine, LC-PCD (ppm)	1	1	1.000							
391.03	Narasin, LC-MS/MS (ppm)	2		0.0000							
400.01	Water Activity, Aqualab chilled mirror (Units)	11	11	0.5307	0.0311	0.5351	0.0170	0.0064	3.17%	0.0041	
400.99	Water Activity, Miscellaneous (Units)	2	2	0.5243	0.0202						
516.53	Arsenic, Total, ICP-MS, Microwave (ppm)	5	4	0.1328	0.0069	0.1328	0.0069	0.0034	5.19%	0.0069	21.68%
516.00	Arsenic, Total, AA, Hydride (ppm)	2	2	0.1328	0.0088						
516.52	Arsenic, Total, ICP-MS, Open vessel (ppm)	2	2	0.1291	0.0135						
516.43	Arsenic, Total, ICP, Microwave (ppm)	2	1	0.1340							
518.53	Cadmium, ICP-MS, Microwave (ppm)	5	4	0.0875	0.0051	0.0875	0.0051	0.0026	5.83%	0.0009	22.00%

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 (R-bar)	Thompson Horwitz %RSD
518.41	Cadmium, ICP, Dry ash (ppm)	2	2	0.0756	0.0101						
518.43	Cadmium, ICP, Microwave (ppm)	2	2	0.1396	0.0855						
518.52	Cadmium, ICP-MS, Open vessel (ppm)	2	2	0.0832	0.0002						
520.53	Chromium, ICP-MS, Microwave (ppm)	5	5	2.734	0.6700	2.734	0.6700	0.2996	24.50%	0.2470	13.75%
520.41	Chromium, ICP, Dry ash (ppm)	3	3	1.867	0.4081	1.867	0.4081	0.2356	21.86%	0.0733	14.56%
520.42	Chromium, ICP, Open vessel (ppm)	3	3	3.232	0.3855	3.232	0.3855	0.2226	11.93%	0.2865	13.41%
520.43	Chromium, ICP, Microwave (ppm)	3	3	3.364	1.018	3.364	1.018	0.5877	30.26%	0.0599	13.33%
520.52	Chromium, ICP-MS, Open vessel (ppm)	2	2	2.350	0.9616						
526.53	Lead, ICP-MS, Microwave (ppm)	7	7	0.1051	0.0441	0.0952	0.0237	0.0112	24.87%	0.0134	22.00%
526.41	Lead, ICP, Dry ash (ppm)	2	2	0.0711	0.0225						
526.52	Lead, ICP-MS, Open vessel (ppm)	2	2	0.0911	0.0233						
526.43	Lead, ICP, Microwave (ppm)	2	1	0.1902							
529.99	Mercury, Miscellaneous (ppb)	4	2	0.7588	0.3412	0.7588	0.3412			0.0022	22.00%
539.53	Nickel, ICP-MS, Microwave (ppm)	3	3	2.093	0.1829	2.093	0.1829	0.1056	8.74%	0.1348	14.31%
539.41	Nickel, ICP, Dry ash (ppm)	2	2	1.635	0.1351						
539.43	Nickel, ICP, Microwave (ppm)	2	2	1.699	0.4679						
539.52	Nickel, ICP-MS, Open vessel (ppm)	2	2	1.845	0.5520						
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	2		0.0000							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	2	1	0.0010							
706.01	Caprylic acid (8:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
706.99	Caprylic acid (8:0), Miscellaneous (% (w/w))	1		0.0200							
708.01	Capric acid (10:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
708.99	Capric acid (10:0), Miscellaneous (% (w/w))	1		0.0200							
710.01	Lauric Acid (12:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0020							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	3									
714.01	Myristic Acid (14:0) , Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0360							
714.99	Myristic Acid (14:0) , Miscellaneous (% (w/w))	2		0.0050							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	2	2	0.5625	0.0531						
716.01	Palmitic Acid (16:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.4895							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	3	2	0.0098	0.0004	0.0098	0.0004			0.0006	8.03%
718.01	Palmitoleic Acid (9c-16:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0230							
720.99	Margaric acid (17:0), Miscellaneous (% (w/w))	1		0.0200							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	2	2	0.0742	0.0083						
722.01	Stearic Acid (18:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0490							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	2	2	0.8769	0.0098						
724.01	Oleic Acid (9c-18:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.8100							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	3	3	1.952	0.1084	1.952	0.1084	0.0626	5.55%	0.0177	3.62%
726.01	Linoleic Acid (9c,12c-18:2), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.845							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	3	3	0.1024	0.0067	0.1024	0.0067	0.0047	6.55%	0.0008	5.64%
728.01	alpha-Linolenic Acid (9c,12c,15c-18:3), Direct Methylation by Alkali Hydrolysis	1	1	0.0800							

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 (R-bar)	Thompson Horwitz %RSD
730.01	Arachidic Acid (20:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0445							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	2	1	0.0117							
732.01	Gondoic Acid (11c-20:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0380							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	2	1	0.0119							
736.01	Arachidonic Acid (5c,8c,11c,14c-20:4), Direct Methylation by Alkali Hydrolysis	1		0.0000							
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (% (w/w))	2		0.0000							
738.01	Mead Acid (11c,14c,17c-20:3), Direct Methylation by Alkali Hydrolysis & GC (%)	1		0.0000							
740.01	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Direct Methylation by Al	1		0.0000							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	3									
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	2	1	0.0070							
744.01	Erucic Acid (13c-22:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	2		0.0050							
746.01	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Direct Methylation	1		0.0000							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (%)	3									
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	2	1	0.0095							
750.01	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Direct Methylation	1		0.0000							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (%)	3									
752.01	Nervonic Acid (24:1) isomers, Direct Methylation by Alkali Hydrolysis & GC (%)	1		0.0000							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	2		0.0050							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	3	3	0.1037	0.0110	0.1037	0.0110	0.0078	10.58%	0.0013	5.63%
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	3	3	2.026	0.1281	2.026	0.1281	0.0740	6.33%	0.0237	3.60%
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	0.7250							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	0.9500							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.985							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	3.850							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	2	2	3.610	0.1058						

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

Methods Reported: 136

Beef Feed, Medicated

Method Precision Report

Labs Reporting: 175

Test Material Code # 202123

Issue Date : 04/30/2021

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
001.00	Loss on Drying, Vac 95°C 5 hr (%)	5	5	10.14	0.2265	0.2223	0.0615	0.2307	2.19%	0.61%	2.28%	3.752
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	46	44	10.18	0.2888	0.2185	0.0933	0.2376	2.14%	0.91%	2.33%	2.547
001.99	Loss on Drying, Miscellaneous (%)	21	18	9.836	0.7596	0.6364	0.0998	0.6442	6.41%	1.01%	6.49%	6.457
002.01	Protein, Crude, Auto Kjel-Foss (%)	17	16	14.63	0.1950	0.1617	0.0530	0.1701	1.11%	0.36%	1.17%	3.210
002.05	Protein, Crude, Copper, Boric Acid (%)	24	22	14.56	0.3084	0.1731	0.1022	0.2010	1.18%	0.70%	1.37%	1.967
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	114	105	14.75	0.2961	0.2281	0.1248	0.2601	1.55%	0.85%	1.77%	2.083
002.11	Protein, Crude, NIR (%)	5	5	15.13	0.9389	0.9385	0.0387	0.9393	6.20%	0.26%	6.21%	24.25
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	12	12	3.357	0.1903	0.1821	0.0779	0.1981	5.43%	2.32%	5.90%	2.542
003.06	Fat, Crude, Pet Ether (%)	16	14	3.447	0.2566	0.1626	0.0657	0.1754	4.65%	1.88%	5.01%	2.668
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	11	10	3.402	0.2422	0.1561	0.1217	0.1979	4.66%	3.63%	5.91%	1.626
003.10	Fat, Crude, Randall, Pet Ether (%)	29	26	3.311	0.1950	0.1666	0.0610	0.1774	5.06%	1.85%	5.39%	2.910
003.13	Fat, Crude, Randall, Hexane Ext. (%)	7	6	3.343	0.0917	0.0898	0.0567	0.1062	2.69%	1.70%	3.18%	1.873
003.14	Fat, Crude, Ankom (%)	55	51	3.183	0.3433	0.2532	0.1125	0.2771	7.82%	3.48%	8.56%	2.463
004.00	Fiber, Crude, Asbestos Free (%)	16	14	3.581	0.3007	0.2145	0.0983	0.2359	5.90%	2.70%	6.49%	2.400
004.06	Fiber, Crude, Fibertec (%)	21	21	3.640	0.3373	0.3246	0.1298	0.3496	8.92%	3.56%	9.60%	2.694
004.07	Fiber, Crude, ANKOM (%)	72	67	3.492	0.4198	0.3497	0.1021	0.3643	10.02%	2.93%	10.44%	3.568
005.00	Ash, 2h @ 600°C (%)	92	88	6.262	0.2353	0.2319	0.0738	0.2433	3.70%	1.18%	3.89%	3.296
005.05	Ash, 3h @ 550°C (%)	26	24	6.523	0.2240	0.2185	0.0480	0.2237	3.36%	0.74%	3.44%	4.663
005.99	Ash, Miscellaneous (%)	9	8	6.365	0.5513	0.2612	0.0512	0.2662	4.00%	0.78%	4.08%	5.196
008.02	Fiber, Acid Detergent, Crucible (%)	11	11	5.243	0.7348	0.7272	0.1495	0.7424	13.87%	2.85%	14.16%	4.965
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	45	41	5.165	0.4722	0.3774	0.1202	0.3961	7.31%	2.33%	7.67%	3.294
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	13.75	1.460	1.455	0.1745	1.465	10.58%	1.27%	10.65%	8.395
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	44	40	12.72	1.039	0.6024	0.1743	0.6271	4.80%	1.39%	5.00%	3.597
010.99	Moisture, Miscellaneous (%)	13	13	10.11	0.3714	0.3694	0.0547	0.3734	3.65%	0.54%	3.69%	6.826
011.01	Loss on Drying, HT, 135°C 2hr (%)	68	63	10.92	0.4015	0.3065	0.0736	0.3152	2.80%	0.67%	2.88%	4.280
012.00	Starch, Polarimetric (Ewers) (%)	12	12	43.10	0.7141	0.6848	0.2863	0.7422	1.59%	0.66%	1.72%	2.592
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	10	42.31	4.071	3.961	1.327	4.178	9.36%	3.14%	9.87%	3.147
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	5	5	41.64	1.135	0.8866	1.003	1.339	2.13%	2.41%	3.21%	1.335
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	22	20	4.127	0.4158	0.3603	0.1010	0.3742	8.83%	2.47%	9.17%	3.705
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	17	15	4.613	0.4618	0.3032	0.1590	0.3424	6.74%	3.54%	7.62%	2.153
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	6	5	3.999	0.2353	0.2293	0.0624	0.2377	5.80%	1.58%	6.01%	3.812
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	10	10	4.540	0.6550	0.6286	0.2606	0.6805	13.85%	5.74%	14.99%	2.611
015.41	Aluminum, ICP, Dry ash (ppm)	5	5	71.00	13.30	13.24	1.724	13.35	18.65%	2.43%	18.81%	7.744
015.43	Aluminum, ICP, Microwave (ppm)	8	6	72.30	25.64	9.730	2.479	10.04	12.02%	3.06%	12.40%	4.050
017.42	Boron, ICP, Open vessel (ppm)	6	5	6.161	0.3020	0.2795	0.2675	0.3869	4.54%	4.34%	6.28%	1.446
017.43	Boron, ICP, Microwave (ppm)	7	5	6.466	0.3499	0.3247	0.1843	0.3734	5.02%	2.85%	5.77%	2.026

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
019.00	Calcium, Ox-Mn04 Vol. (%)	7	7	1.256	0.0874	0.0843	0.0330	0.0905	6.71%	2.62%	7.20%	2.746
019.08	Calcium, EDTA (%)	10	8	1.175	0.2326	0.2197	0.0063	0.2198	18.13%	0.52%	18.14%	34.82
019.31	Calcium, AAS, Dry ash (%)	18	16	1.220	0.0550	0.0470	0.0332	0.0575	3.84%	2.71%	4.69%	1.735
019.41	Calcium, ICP, Dry ash (%)	23	21	1.246	0.0473	0.0325	0.0219	0.0391	2.59%	1.74%	3.12%	1.791
019.42	Calcium, ICP, Open vessel (%)	18	17	1.259	0.1036	0.0926	0.0434	0.1023	7.30%	3.42%	8.07%	2.357
019.43	Calcium, ICP, Microwave (%)	31	27	1.274	0.0726	0.0527	0.0191	0.0560	4.16%	1.51%	4.43%	2.935
019.52	Calcium, ICP-MS, Open vessel (%)	5	5	1.304	0.0953	0.0783	0.0766	0.1096	6.01%	5.87%	8.40%	1.430
019.53	Calcium, ICP-MS, Microwave (%)	5	5	1.255	0.0623	0.0578	0.0329	0.0665	4.60%	2.62%	5.30%	2.020
021.43	Cobalt, ICP, Microwave (ppm)	9	8	2.284	0.9871	0.2343	0.2402	0.3355	11.91%	12.21%	17.06%	1.397
021.53	Cobalt, ICP-MS, Microwave (ppm)	7	7	2.015	0.2035	0.1666	0.1651	0.2346	8.27%	8.19%	11.64%	1.421
022.31	Copper, AAS, Dry ash (ppm)	12	12	47.45	5.865	5.768	1.506	5.961	12.15%	3.17%	12.56%	3.959
022.41	Copper, ICP, Dry ash (ppm)	16	15	46.08	2.334	2.172	1.410	2.590	4.72%	3.07%	5.63%	1.837
022.42	Copper, ICP, Open vessel (ppm)	19	18	48.20	3.053	2.975	0.9668	3.128	6.17%	2.01%	6.49%	3.235
022.43	Copper, ICP, Microwave (ppm)	28	25	49.59	4.651	3.598	0.7721	3.680	7.36%	1.58%	7.53%	4.765
022.53	Copper, ICP-MS, Microwave (ppm)	6	6	47.28	3.726	3.180	2.746	4.201	6.73%	5.81%	8.89%	1.530
025.31	Iron, AAS, Dry ash (ppm)	11	11	234.8	26.07	25.87	4.546	26.27	11.02%	1.94%	11.19%	5.779
025.41	Iron, ICP, Dry ash (ppm)	19	17	221.2	14.97	10.38	4.991	11.52	4.67%	2.24%	5.18%	2.308
025.42	Iron, ICP, Open vessel (ppm)	15	14	222.8	16.33	16.20	6.707	17.54	7.28%	3.01%	7.88%	2.615
025.43	Iron, ICP, Microwave (ppm)	28	25	229.3	39.52	16.30	7.315	17.87	6.93%	3.11%	7.59%	2.443
027.31	Magnesium, AAS, Dry ash (%)	7	7	0.2642	0.0107	0.0103	0.0040	0.0111	3.90%	1.52%	4.19%	2.747
027.41	Magnesium, ICP, Dry ash (%)	16	16	0.2574	0.0091	0.0068	0.0085	0.0109	2.63%	3.31%	4.23%	1.276
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.2618	0.0139	0.0130	0.0069	0.0147	4.96%	2.62%	5.61%	2.138
027.43	Magnesium, ICP, Microwave (%)	23	21	0.2630	0.0193	0.0117	0.0074	0.0139	4.50%	2.85%	5.33%	1.867
027.53	Magnesium, ICP-MS, Microwave (%)	5	5	0.2642	0.0083	0.0068	0.0069	0.0096	2.56%	2.60%	3.65%	1.401
028.31	Manganese, AAS, Dry ash (ppm)	12	11	144.3	8.877	8.817	1.456	8.936	6.11%	1.01%	6.19%	6.136
028.41	Manganese, ICP, Dry ash (ppm)	16	15	138.7	14.88	14.56	3.140	14.90	10.59%	2.28%	10.83%	4.744
028.42	Manganese, ICP, Open vessel (ppm)	19	17	151.1	10.43	10.45	3.546	11.04	6.91%	2.35%	7.30%	3.112
028.43	Manganese, ICP, Microwave (ppm)	26	24	148.9	8.544	8.342	2.672	8.760	5.63%	1.80%	5.91%	3.278
028.53	Manganese, ICP-MS, Microwave (ppm)	6	6	149.1	9.701	9.417	3.298	9.977	6.31%	2.21%	6.69%	3.026
031.01	Phosphorus, Photometric (%)	34	31	0.5904	0.0236	0.0192	0.0091	0.0213	3.24%	1.54%	3.58%	2.330
031.41	Phosphorus, ICP, Dry ash (%)	22	19	0.5959	0.0196	0.0143	0.0095	0.0171	2.41%	1.60%	2.89%	1.805
031.42	Phosphorus, ICP, Open vessel (%)	20	19	0.5874	0.0345	0.0232	0.0209	0.0312	3.91%	3.53%	5.27%	1.492
031.43	Phosphorus, ICP, Microwave (%)	30	27	0.6138	0.0353	0.0353	0.0091	0.0365	5.76%	1.48%	5.94%	4.016
032.31	Potassium, AAS, Dry ash (%)	12	11	0.8183	0.0575	0.0573	0.0080	0.0578	7.00%	0.98%	7.06%	7.209
032.41	Potassium, ICP, Dry ash (%)	20	18	0.8170	0.0487	0.0340	0.0145	0.0369	4.12%	1.75%	4.48%	2.554
032.42	Potassium, ICP, Open vessel (%)	18	17	0.8491	0.0387	0.0373	0.0146	0.0400	4.39%	1.72%	4.72%	2.739
032.43	Potassium, ICP, Microwave (%)	28	26	0.8467	0.0365	0.0327	0.0163	0.0365	3.85%	1.91%	4.30%	2.244
032.52	Potassium, ICP-MS, Open vessel (%)	5	5	0.8726	0.0602	0.0534	0.0392	0.0663	6.12%	4.50%	7.60%	1.690
033.00	Salt as chloride, Sol Cl (%)	19	17	1.010	0.1212	0.0360	0.0215	0.0419	3.50%	2.08%	4.07%	1.953
033.01	Salt as chloride, Poten Cl (%)	28	24	1.044	0.0309	0.0256	0.0065	0.0265	2.45%	0.62%	2.53%	4.088
033.99	Salt, Miscellaneous (%)	10	8	0.9244	0.2000	0.0888	0.0148	0.0900	9.01%	1.51%	9.14%	6.070
034.04	Selenium, AA, Hydride (ppm)	5	5	1.195	0.1233	0.1207	0.0354	0.1258	10.10%	2.96%	10.53%	3.555
034.53	Selenium, ICP-MS, Microwave (ppm)	10	10	1.282	0.1343	0.1136	0.1012	0.1522	8.86%	7.89%	11.87%	1.503
035.31	Sodium, AAS, Dry ash (%)	12	12	0.3251	0.0163	0.0146	0.0103	0.0178	4.48%	3.15%	5.48%	1.738
035.41	Sodium, ICP, Dry ash (%)	22	19	0.3287	0.0226	0.0114	0.0085	0.0142	3.47%	2.57%	4.32%	1.679
035.42	Sodium, ICP, Open vessel (%)	17	15	0.3314	0.0173	0.0128	0.0052	0.0139	3.89%	1.59%	4.21%	2.644

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
035.43	Sodium, ICP, Microwave (%)	25	22	0.3349	0.0146	0.0104	0.0076	0.0129	3.13%	2.28%	3.87%	1.696
035.53	Sodium, ICP-MS, Microwave (%)	5	5	0.3325	0.0118	0.0080	0.0124	0.0147	2.39%	3.72%	4.42%	1.189
036.42	Sulfur, ICP, Open vessel (%)	20	19	0.2517	0.0266	0.0179	0.0105	0.0208	7.25%	4.25%	8.41%	1.976
036.43	Sulfur, ICP, Microwave (%)	16	15	0.2607	0.0172	0.0167	0.0059	0.0177	6.40%	2.26%	6.79%	3.004
037.31	Zinc, AAS, Dry ash (ppm)	11	11	178.5	7.719	7.511	2.518	7.922	4.21%	1.41%	4.44%	3.145
037.41	Zinc, ICP, Dry ash (ppm)	17	14	178.3	9.643	7.238	2.827	7.771	4.12%	1.61%	4.42%	2.749
037.42	Zinc, ICP, Open vessel (ppm)	18	18	176.9	11.72	11.13	5.195	12.28	6.29%	2.94%	6.94%	2.364
037.43	Zinc, ICP, Microwave (ppm)	27	24	179.6	10.43	10.05	2.444	10.35	5.62%	1.37%	5.78%	4.234
037.53	Zinc, ICP-MS, Microwave (ppm)	5	5	179.0	5.511	4.373	4.744	6.452	2.44%	2.65%	3.60%	1.360
038.43	Molybdenum, ICP, Microwave (ppm)	8	6	1.856	0.1944	0.2070	0.0151	0.2075	11.05%	0.80%	11.08%	13.78
038.53	Molybdenum, ICP-MS, Microwave (ppm)	5	5	2.125	0.1037	0.0838	0.0865	0.1204	3.94%	4.07%	5.67%	1.392
106.02	Vitamin A, LC (KU / kg)	16	14	14.34	5.573	2.986	1.404	3.299	22.73%	10.69%	25.12%	2.349
109.02	Vitamin E, LC (IU / kg)	15	14	94.14	13.82	10.11	2.134	10.34	11.03%	2.33%	11.28%	4.844
120.00	Alanine, Post-col Ninhydrin Der (%)	16	15	0.8005	0.0523	0.0382	0.0112	0.0398	4.83%	1.42%	5.03%	3.553
120.05	Alanine, Pre-col AQC Der (%)	7	5	0.8460	0.1167	0.0038	0.0071	0.0080	0.47%	0.89%	1.00%	1.134
121.00	Arginine, Post-col Ninhydrin Der (%)	16	15	0.8415	0.0387	0.0381	0.0094	0.0393	4.53%	1.11%	4.67%	4.188
121.05	Arginine, Pre-col AQC Der (%)	7	6	1.339	1.267	0.0464	0.0226	0.0516	5.40%	2.62%	6.00%	2.287
122.00	Aspartic, Post-col Ninhydrin Der (%)	16	16	1.208	0.0552	0.0536	0.0185	0.0567	4.43%	1.54%	4.69%	3.057
122.05	Aspartic, Pre-col AQC Der (%)	7	6	2.047	1.971	0.1268	0.0138	0.1275	9.73%	1.06%	9.79%	9.273
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	16	16	0.2557	0.0245	0.0241	0.0061	0.0249	9.44%	2.39%	9.74%	4.081
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	5	5	0.2257	0.0237	0.0213	0.0147	0.0259	9.43%	6.53%	11.47%	1.756
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	15	2.516	0.1369	0.1031	0.0309	0.1076	4.13%	1.24%	4.32%	3.487
125.05	Glutamic, Pre-col AQC Der (%)	7	6	3.576	2.682	0.2487	0.0222	0.2496	9.69%	0.86%	9.73%	11.26
126.00	Glycine, Post-col Ninhydrin Der (%)	16	16	0.6261	0.0299	0.0287	0.0118	0.0311	4.59%	1.89%	4.96%	2.621
126.05	Glycine, Pre-col AQC Der (%)	7	6	1.176	1.425	0.0742	0.0088	0.0747	11.64%	1.38%	11.72%	8.509
127.00	Histidine, Post-col Ninhydrin Der (%)	16	15	0.3711	0.0201	0.0184	0.0056	0.0193	5.00%	1.52%	5.23%	3.437
127.05	Histidine, Pre-col AQC Der (%)	7	6	0.5936	0.4911	0.0979	0.0159	0.0992	23.82%	3.87%	24.14%	6.233
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	16	0.5150	0.0437	0.0427	0.0131	0.0446	8.29%	2.54%	8.67%	3.410
128.05	Isoleucine, Pre-col AQC Der (%)	7	6	0.8254	0.9248	0.0967	0.0097	0.0972	20.26%	2.04%	20.36%	9.993
129.00	Leucine, Post-col Ninhydrin Der (%)	16	15	1.219	0.0591	0.0431	0.0173	0.0464	3.50%	1.41%	3.78%	2.676
129.05	Leucine, Pre-col AQC Der (%)	7	6	1.712	1.512	0.1290	0.0145	0.1298	11.30%	1.27%	11.37%	8.958
130.00	L-Lysine, Post-col Ninhydrin Der (%)	16	16	0.6308	0.0292	0.0284	0.0093	0.0299	4.51%	1.47%	4.74%	3.228
130.05	L-Lysine, Pre-col AQC Der (%)	7	5	0.6785	0.0530	0.0589	0.0032	0.0590	8.71%	0.47%	8.72%	18.64
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	16	15	0.2249	0.0246	0.0141	0.0065	0.0155	6.15%	2.82%	6.76%	2.395
131.05	Methionine, PAO Pre-col AQC Der (%)	6	5	0.5555	0.8513	0.0478	0.0125	0.0494	22.92%	5.97%	23.69%	3.964
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	15	0.6483	0.0529	0.0415	0.0125	0.0433	6.32%	1.90%	6.60%	3.478
132.05	Phenylalanine, Pre-col AQC Der (%)	7	6	0.8874	0.8403	0.1705	0.0091	0.1708	29.64%	1.59%	29.68%	18.71
133.00	Proline, Post-col Ninhydrin Der (%)	16	13	0.9658	0.1102	0.0473	0.0096	0.0482	5.09%	1.03%	5.19%	5.041
133.05	Proline, Pre-col AQC Der (%)	7	6	1.297	0.7512	0.1780	0.0115	0.1784	17.46%	1.12%	17.50%	15.57
134.00	Serine, Post-col Ninhydrin Der (%)	16	16	0.6590	0.0481	0.0468	0.0158	0.0494	7.11%	2.39%	7.50%	3.133
134.05	Serine, Pre-col AQC Der (%)	7	6	1.003	0.8681	0.0528	0.0172	0.0555	7.81%	2.55%	8.22%	3.224
135.00	Threonine, Post-col Ninhydrin Der (%)	16	15	0.5218	0.0242	0.0174	0.0084	0.0193	3.32%	1.59%	3.68%	2.315
135.05	Threonine, Pre-col AQC Der (%)	7	6	0.8814	0.9510	0.0671	0.0079	0.0676	12.85%	1.52%	12.94%	8.518
136.00	Tryptophan, Alka-Hydrol Post-col Ninhydrin Der (%)	6	5	0.1887	0.0736	0.0180	0.0077	0.0196	11.27%	4.83%	12.26%	2.541
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	12	0.4342	0.0492	0.0489	0.0074	0.0495	11.27%	1.70%	11.40%	6.724
137.05	Tyrosine, Pre-col AQC Der (%)	7	6	0.5198	0.0746	0.0743	0.0090	0.0748	14.29%	1.73%	14.39%	8.297

Test Material Code # 202123

Issue Date : 04/30/2021

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
138.00	Valine, Post-col Ninhydrin Der (%)	16	15	0.6542	0.0372	0.0366	0.0095	0.0378	5.61%	1.45%	5.80%	3.995
138.05	Valine, Pre-col AQC Der (%)	7	5	1.057	1.048	0.1362	0.0055	0.1363	22.46%	0.90%	22.48%	24.89
361.05	Lasalocid Sodium, LC-MS/MS (ppm)	6	5	0.8835	0.6797	0.2326	0.0836	0.2472	37.51%	13.48%	39.86%	2.956
365.03	Monensin, LC-PCD (ppm)	5	5	16.71	0.6510		0.9341			5.59%		
365.05	Monensin, LC-MS/MS (ppm)	12	11	18.25	3.288	1.843	1.519	2.388	10.53%	8.68%	13.65%	1.572
400.01	Water Activity, Aqualab chilled mirror (Units)	11	10	0.5307	0.0311	0.0156	0.0040	0.0161	2.89%	0.74%	2.99%	4.030
520.53	Chromium, ICP-MS, Microwave (ppm)	5	5	2.734	0.6700	0.6476	0.2426	0.6916	23.69%	8.87%	25.29%	2.851
526.53	Lead, ICP-MS, Microwave (ppm)	7	6	0.1051	0.0441	0.0127	0.0116	0.0172	14.25%	12.96%	19.26%	1.486

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