



AAFCO
Proficiency Testing Program



Animal Feed Scheme

Dry Cat Feed

Test Material Code # 202023

Method Summary Report

(Precision Report Follows)

Labs Reporting: 190

Methods Reported: 415

Issue Date : 04/30/2020

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	0.2000							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	50	49	7.487	0.2796	7.505	0.2020	0.0361	2.69%	0.1013	2.95%
001.99	Loss on Drying, Miscellaneous (%)	20	20	7.262	0.5459	7.350	0.3549	0.0992	4.83%	0.1150	2.96%
001.03	Loss on Drying, Low temp. methods (%)	6	6	7.498	0.1386	7.511	0.1267	0.0647	1.69%	0.0800	2.95%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	2	2	7.493	0.1382						
001.05	Loss on Drying, LECO (%)	2	2	7.683	0.3147						
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	132	130	32.04	0.3929	32.05	0.3267	0.0358	1.02%	0.2090	1.77%
002.05	Protein, Crude, Copper, Boric Acid (%)	27	26	31.56	0.4291	31.62	0.3342	0.0819	1.06%	0.1333	1.78%
002.01	Protein, Crude, Auto Kjeh-Foss (%)	18	17	31.65	0.4357	31.59	0.3093	0.0938	0.98%	0.1652	1.78%
002.11	Protein, Crude, NIR (%)	5	5	32.08	1.622	32.08	1.622	0.7256	5.06%	0.1120	1.77%
002.04	Protein, Crude, Copper Catalyst (%)	3	3	31.73	0.2336	31.73	0.2336	0.1349	0.74%	0.2567	1.78%
002.00	Protein, Crude, Crude (%)	2	2	32.09	0.0884						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	2	2	31.78	0.0664						
002.08	Protein, Crude, Cu/Ti (%)	2	2	31.73	0.0389						
002.99	Protein, Crude, Miscellaneous (%)	1	1	32.44							
003.14	Fat, Crude, Ankom (%)	41	40	7.804	0.7564	7.625	0.1910	0.0378	2.51%	0.1091	2.95%
003.10	Fat, Crude, Randall, Pet Ether (%)	26	25	7.533	0.1359	7.532	0.1386	0.0347	1.84%	0.0831	2.95%
003.06	Fat, Crude, Pet Ether (%)	14	14	7.773	0.8115	7.585	0.2127	0.0711	2.80%	0.1672	2.95%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	14	14	7.821	1.066	7.591	0.3269	0.1092	4.31%	0.1818	2.95%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	8	8	7.632	0.1344	7.616	0.1106	0.0489	1.45%	0.0941	2.95%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	8	8	7.984	1.307	7.655	0.5456	0.2411	7.13%	0.1849	2.94%
003.11	Fat, Crude, NIR (%)	5	5	9.351	1.211	9.351	1.211	0.5416	12.95%	0.0280	2.86%
003.99	Fat, Crude, Miscellaneous (%)	3	3	8.493	1.825	8.493	1.825	1.054	21.49%	0.0867	2.90%
003.12	Fat, Crude, Hexane Ext (%)	2	2	7.338	0.3995						
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	7.555							
004.07	Fiber, Crude, ANKOM (%)	69	67	4.648	1.129	4.532	0.6253	0.0955	13.80%	0.2067	3.19%
004.06	Fiber, Crude, Fibertec (%)	19	19	4.892	0.4997	4.900	0.5374	0.1541	10.97%	0.1768	3.15%
004.00	Fiber, Crude, Asbestos Free (%)	13	12	4.859	0.5273	4.847	0.5707	0.2059	11.77%	0.2289	3.15%
004.03	Fiber, Crude, Fritted Glass (%)	5	5	4.261	1.294	4.261	1.294	0.5786	30.37%	0.2260	3.22%

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004.11	Fiber, Crude, NIR (%)	3	3	5.581	2.309	5.581	2.309	1.632	41.37%	0.0250	3.09%
004.99	Fiber, Crude, Miscellaneous (%)	3	3	4.466	0.5696	4.466	0.5696	0.3288	12.75%	0.1170	3.19%
004.01	Fiber, Crude, Sing Filt (%)	1	1	6.950							
005.00	Ash, 2h @ 600°C (%)	87	86	6.862	0.1593	6.865	0.1004	0.0135	1.46%	0.0753	2.99%
005.05	Ash, 3h @ 550°C (%)	29	28	6.919	0.1370	6.932	0.0971	0.0229	1.40%	0.0577	2.99%
005.99	Ash, Miscellaneous (%)	8	7	6.821	0.3797	6.821	0.4306	0.2034	6.31%	0.0571	3.00%
005.02	Ash, LECO (%)	2	2	6.772	0.3631						
005.03	Ash, Microwave furnace (%)	2	2	6.853	0.0318						
005.11	Ash, NIR (%)	2	2	8.950	0.3536						
006.00	Total Sugars, As sucrose (%)	2	2	3.121	1.097						
006.99	Total Sugars, Miscellaneous (%)	2	2	2.104	1.055						
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	41	41	6.886	1.570	6.844	1.382	0.2697	20.19%	0.3689	2.99%
008.02	Fiber, Acid Detergent, Crucible (%)	10	10	6.565	0.9290	6.660	0.8126	0.3212	12.20%	0.3075	3.01%
008.05	Fiber, Acid Detergent, Acid Detergent-Hach (%)	1	1	6.890							
008.99	Fiber, Acid Detergent, Miscellaneous (%)	1	1	6.835							
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	41	40	14.77	2.364	14.64	2.268	0.4483	15.50%	0.4908	2.61%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	13.08	1.393	13.10	1.538	0.6078	11.74%	0.2989	2.72%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	1	1	14.66							
010.99	Moisture, Miscellaneous (%)	18	18	7.619	0.5367	7.611	0.3547	0.1045	4.66%	0.0775	2.95%
010.03	Moisture, Karl-Fischer (%)	2	2	7.520	0.1344						
010.11	Moisture, NIR (%)	2	2	7.318	1.192						
011.01	Loss on Drying, 135°C 2hr (%)	65	63	8.065	0.3489	8.109	0.2347	0.0370	2.89%	0.0780	2.92%
011.02	Loss on Drying, 130°C for 2 hours (%)	4	4	7.996	0.3865	7.996	0.3865	0.1933	4.83%	0.2125	2.93%
011.99	Loss on Drying, High Temp. Methods Miscellaneous (%)	3	3	7.656	0.1829	7.656	0.1829	0.1056	2.39%	0.1100	2.94%
012.00	Starch, Polarimetric (Ewers) (%)	13	13	27.66	0.9523	27.69	1.018	0.3529	3.68%	0.2485	1.90%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	12	11	26.66	3.199	26.41	1.016	0.3827	3.85%	0.6210	1.95%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	5	5	28.95	3.997	28.95	3.997	1.787	13.81%	1.031	1.86%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	4	4	26.24	2.033	26.24	2.033	1.016	7.75%	0.4003	1.95%
012.11	Starch, NIR (%)	2	2	27.35	18.01						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	27.14							
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	27	27	10.88	0.7719	10.78	0.4471	0.1076	4.15%	0.1863	2.80%
013.02	Fat, Acid Pretreat, Mojonniier, Bak Ext (%)	25	25	11.00	0.7585	11.10	0.3660	0.0915	3.30%	0.1494	2.78%
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	15	14	10.72	0.3243	10.73	0.3539	0.1182	3.30%	0.1604	2.80%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	10	10	10.08	0.5800	10.18	0.4020	0.1589	3.95%	0.1914	2.82%
013.08	Fat, Base Pretreat, Roese-Gottlieb Modified (%)	1	1	8.679							
013.99	Fat, Acid Pretreat, Pretreatment, Misc (%)	1	1	11.35							
015.43	Aluminum, ICP, Microwave (ppm)	9	8	44.32	6.828	44.51	7.075	3.127	15.90%	1.523	9.04%
015.41	Aluminum, ICP, Dry ash (ppm)	3	3	41.33	13.43	41.33	13.43	7.752	32.48%	0.2775	9.14%
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	31.34	25.16						
015.53	Aluminum, ICP-MS, Microwave (ppm)	2	2	52.71	0.9086						

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017.42	Boron, ICP, Open vessel (ppm)	6	6	9.775	1.385	9.691	1.371	0.6996	14.15%	0.6947	11.37%
017.43	Boron, ICP, Microwave (ppm)	7	5	9.561	0.3672	9.561	0.3672	0.2053	3.84%	0.0962	11.39%
017.41	Boron, ICP, Dry ash (ppm)	3	3	9.379	0.6793	9.379	0.6793	0.3922	7.24%	0.4573	11.42%
017.44	Boron, ICP, Dry ash (ppm)	1	1	13.92							
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	49.64							
019.41	Calcium, ICP, Dry ash (%)	26	26	1.234	0.0791	1.231	0.0763	0.0187	6.20%	0.0356	3.88%
019.43	Calcium, ICP, Microwave (%)	26	25	1.263	0.0841	1.257	0.0793	0.0198	6.31%	0.0400	3.86%
019.42	Calcium, ICP, Open vessel (%)	19	19	1.275	0.1117	1.278	0.1208	0.0346	9.45%	0.0443	3.85%
019.31	Calcium, AAS, Dry ash (%)	17	17	1.227	0.0871	1.222	0.0852	0.0258	6.97%	0.0378	3.88%
019.44	Calcium, ICP, Dry ash (%)	9	9	1.210	0.0234	1.210	0.0265	0.0111	2.19%	0.0286	3.89%
019.00	Calcium, Ox-Mn04 Vol. (%)	8	8	1.265	0.1280	1.239	0.0730	0.0323	5.89%	0.0186	3.87%
019.08	Calcium, EDTA (%)	6	6	1.278	0.1006	1.262	0.0735	0.0375	5.83%	0.0070	3.86%
019.53	Calcium, ICP-MS, Microwave (%)	5	5	1.237	0.0775	1.237	0.0775	0.0346	6.26%	0.0456	3.87%
019.99	Calcium, Miscellaneous (%)	5	5	1.171	0.0888	1.171	0.0888	0.0397	7.59%	0.0180	3.91%
019.02	Calcium, Hach Method (%)	1	1	0.9755							
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	1.240							
019.09	Calcium, Ion-selective electrode (%)	1	1	1.241							
019.32	Calcium, AAS, Open vessel (%)	1	1	1.165							
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	1.225							
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	1.106							
021.53	Cobalt, ICP-MS, Microwave (ppm)	5	5	0.3073	0.0992	0.3073	0.0992	0.0444	32.27%	0.0534	19.10%
021.43	Cobalt, ICP, Microwave (ppm)	6	4	0.3916	0.2119	0.3916	0.2119	0.0086	54.11%	0.0609	18.42%
021.31	Cobalt, AAS, Dry ash (ppm)	3	2	0.3375	0.2652	0.3375	0.2652			0.0550	18.84%
021.41	Cobalt, ICP, Dry ash (ppm)	1	1	0.4893							
021.42	Cobalt, ICP, Open vessel (ppm)	2	1	0.3100							
021.52	Cobalt, ICP-MS, Open vessel (ppm)	1	1	0.1500							
022.43	Copper, ICP, Microwave (ppm)	23	22	13.61	1.382	13.54	1.007	0.2683	7.44%	0.5269	10.81%
022.42	Copper, ICP, Open vessel (ppm)	21	21	13.87	1.238	13.97	0.9655	0.2634	6.91%	0.7955	10.76%
022.41	Copper, ICP, Dry ash (ppm)	18	18	14.74	1.711	14.60	1.488	0.4384	10.19%	0.5889	10.69%
022.31	Copper, AAS, Dry ash (ppm)	12	11	14.51	3.073	14.84	2.746	1.035	18.50%	0.6536	10.66%
022.53	Copper, ICP-MS, Microwave (ppm)	6	6	12.44	0.7559	12.44	0.8572	0.4374	6.89%	1.205	10.95%
022.33	Copper, AAS, Microwave (ppm)	3	3	14.25	1.037	14.25	1.037	0.5989	7.28%	0.5667	10.72%
022.44	Copper, ICP, Dry ash (ppm)	3	3	16.05	3.158	16.05	3.158	1.823	19.68%	0.7373	10.53%
022.99	Copper, Miscellaneous (ppm)	3	3	12.68	0.3175	12.68	0.3175	0.2245	2.50%	0.8333	10.91%
022.32	Copper, AAS, Open vessel (ppm)	1	1	13.95							
022.51	Copper, ICP-MS, Dry ash (ppm)	1	1	15.43							
022.52	Copper, ICP-MS, Open vessel (ppm)	1	1	14.00							
025.43	Iron, ICP, Microwave (ppm)	25	25	203.0	20.68	201.6	16.99	4.249	8.43%	9.630	7.20%
025.41	Iron, ICP, Dry ash (ppm)	22	21	189.5	29.40	185.2	19.01	5.185	10.26%	7.672	7.29%
025.42	Iron, ICP, Open vessel (ppm)	17	17	196.8	11.46	196.9	12.78	3.875	6.49%	10.83	7.22%

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025.31	Iron, AAS, Dry ash (ppm)	15	15	211.6	75.78	196.7	33.16	10.70	16.86%	10.52	7.22%
025.53	Iron, ICP-MS, Microwave (ppm)	4	4	188.1	10.44	188.1	10.44	5.222	5.55%	4.970	7.27%
025.99	Iron, Miscellaneous (ppm)	2	2	188.5	13.44						
025.51	Iron, ICP-MS, Dry ash (ppm)	1	1	207.7							
025.52	Iron, ICP-MS, Open vessel (ppm)	1	1	146.1							
027.43	Magnesium, ICP, Microwave (%)	22	21	0.1290	0.0099	0.1293	0.0074	0.0020	5.71%	0.0067	5.44%
027.41	Magnesium, ICP, Dry ash (%)	17	17	0.1314	0.0087	0.1312	0.0097	0.0029	7.36%	0.0067	5.43%
027.42	Magnesium, ICP, Open vessel (%)	17	17	0.1273	0.0137	0.1290	0.0105	0.0032	8.12%	0.0034	5.44%
027.31	Magnesium, AAS, Dry ash (%)	9	9	0.1413	0.0306	0.1337	0.0118	0.0049	8.83%	0.0041	5.41%
027.44	Magnesium, ICP, Dry ash (%)	7	7	0.1293	0.0023	0.1293	0.0027	0.0013	2.05%	0.0029	5.44%
027.53	Magnesium, ICP-MS, Microwave (%)	5	5	0.1320	0.0042	0.1320	0.0042	0.0019	3.19%	0.0038	5.43%
027.99	Magnesium, Miscellaneous (%)	3	3	0.1300	0.0100	0.1300	0.0100			0.0000	5.44%
027.52	Magnesium, ICP-MS, Open vessel (%)	2	2	0.1267	0.0051						
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.1050							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.1170							
028.43	Manganese, ICP, Microwave (ppm)	24	24	52.36	4.545	52.45	4.232	1.080	8.07%	1.601	8.81%
028.42	Manganese, ICP, Open vessel (ppm)	21	21	51.67	6.126	52.60	3.413	0.9310	6.49%	1.499	8.81%
028.41	Manganese, ICP, Dry ash (ppm)	16	16	54.00	8.060	52.50	2.519	0.7871	4.80%	1.766	8.81%
028.31	Manganese, AAS, Dry ash (ppm)	14	13	56.12	31.04	48.97	4.676	1.621	9.55%	1.530	8.91%
028.53	Manganese, ICP-MS, Microwave (ppm)	6	6	50.20	2.459	50.20	2.788	1.423	5.55%	1.865	8.87%
028.44	Manganese, ICP, Dry ash (ppm)	4	4	49.28	2.038	49.28	2.038	1.019	4.14%	0.6155	8.90%
028.99	Manganese, Miscellaneous (ppm)	3	3	51.43	3.093	51.43	3.093	1.785	6.01%	1.200	8.84%
028.32	Manganese, AAS, Open vessel (ppm)	1	1	57.49							
028.33	Manganese, AAS, Microwave (ppm)	1	1	47.96							
028.52	Manganese, ICP-MS, Open vessel (ppm)	1	1	53.50							
031.01	Phosphorus, Photometric (%)	28	27	1.069	0.0387	1.072	0.0334	0.0080	3.11%	0.0178	3.96%
031.43	Phosphorus, ICP, Microwave (%)	27	26	1.110	0.0589	1.106	0.0534	0.0131	4.83%	0.0214	3.94%
031.41	Phosphorus, ICP, Dry ash (%)	24	24	1.113	0.0919	1.100	0.0567	0.0145	5.15%	0.0420	3.94%
031.42	Phosphorus, ICP, Open vessel (%)	20	19	1.107	0.0708	1.102	0.0686	0.0197	6.23%	0.0516	3.94%
031.44	Phosphorus, ICP, Dry ash (%)	9	9	1.074	0.0396	1.070	0.0335	0.0140	3.13%	0.0220	3.96%
031.53	Phosphorus, ICP-MS, Microwave (%)	5	5	1.103	0.1015	1.103	0.1015	0.0454	9.21%	0.0423	3.94%
031.03	Phosphorus, Autoanalyzer (%)	3	3	1.081	0.0526	1.081	0.0526	0.0372	4.87%	0.0179	3.95%
031.99	Phosphorus, Miscellaneous (%)	3	3	1.013	0.0340	1.013	0.0340	0.0196	3.36%	0.0267	3.99%
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.9741	0.0909						
031.00	Phosphorus, Vol (%)	1	1	1.085							
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	1	1	1.110							
031.06	Phosphorus, Hach Method (%)	1	1	1.025							
032.43	Potassium, ICP, Microwave (%)	21	20	0.7698	0.0406	0.7724	0.0395	0.0111	5.12%	0.0220	4.16%
032.41	Potassium, ICP, Dry ash (%)	19	18	0.7571	0.0444	0.7573	0.0502	0.0148	6.62%	0.0150	4.17%
032.42	Potassium, ICP, Open vessel (%)	17	16	0.7686	0.0497	0.7720	0.0396	0.0124	5.13%	0.0150	4.16%

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032.44	Potassium, ICP, Dry ash (%)	7	7	0.7498	0.0122	0.7498	0.0138	0.0065	1.84%	0.0156	4.18%
032.31	Potassium, AAS, Dry ash (%)	6	6	0.7331	0.0406	0.7331	0.0461	0.0235	6.28%	0.0120	4.19%
032.53	Potassium, ICP-MS, Microwave (%)	5	5	0.7734	0.0470	0.7734	0.0470	0.0210	6.08%	0.0290	4.16%
032.99	Potassium, Miscellaneous (%)	3	3	0.7317	0.0104	0.7317	0.0104	0.0060	1.42%	0.0233	4.19%
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	0.6793	0.1108						
032.02	Potassium, Flame Emission (%)	1	1	0.8050							
032.32	Potassium, AAS, Open vessel (%)	1	1	0.6200							
032.51	Potassium, ICP-MS, Dry ash (%)	1	1	0.6700							
033.01	Salt as chloride, Poten Cl (%)	18	18	1.199	0.0902	1.186	0.0320	0.0094	2.70%	0.0148	3.90%
033.00	Salt as chloride, Sol Cl (%)	15	14	1.128	0.0691	1.129	0.0656	0.0219	5.82%	0.0192	3.93%
033.99	Salt, Miscellaneous (%)	9	9	1.255	0.2287	1.255	0.2594	0.1081	20.67%	0.0266	3.87%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	1.098	0.0501	1.098	0.0501	0.0289	4.56%	0.0167	3.94%
033.03	Salt as chloride, Quantab (%)	2	2	0.7700	0.4384						
034.53	Selenium, ICP-MS, Microwave (ppm)	10	9	0.6523	0.1183	0.6342	0.0863	0.0359	13.60%	0.0485	17.13%
034.43	Selenium, ICP, Microwave (ppm)	7	6	1.013	0.8134	1.013	0.9224	0.4707	91.06%	0.0370	15.97%
034.41	Selenium, ICP, Dry ash (ppm)	3	3	0.9022	0.6743	0.9022	0.6743	0.4768	74.74%	0.0297	16.25%
034.52	Selenium, ICP-MS, Open vessel (ppm)	3	3	0.6283	0.0679	0.6283	0.0679	0.0480	10.80%	0.0799	17.16%
034.04	Selenium, AA, Hydride (ppm)	2	2	0.5660	0.0693						
034.01	Selenium, Fluor (ppm)	1	1	0.6428							
034.99	Selenium, Miscellaneous (ppm)	1	1	1.750							
034.42	Selenium, ICP, Open vessel (ppm)	1	1	1.000							
035.41	Sodium, ICP, Dry ash (%)	32	32	0.5802	0.0350	0.5796	0.0340	0.0075	5.86%	0.0155	4.34%
035.43	Sodium, ICP, Microwave (%)	25	25	0.5994	0.0570	0.5928	0.0391	0.0098	6.60%	0.0282	4.33%
035.42	Sodium, ICP, Open vessel (%)	17	16	0.5757	0.0474	0.5773	0.0500	0.0156	8.67%	0.0176	4.34%
035.31	Sodium, AAS, Dry ash (%)	11	11	0.6030	0.1402	0.5716	0.0496	0.0187	8.69%	0.0112	4.35%
035.53	Sodium, ICP-MS, Microwave (%)	5	5	0.5854	0.0107	0.5854	0.0107	0.0048	1.82%	0.0183	4.34%
035.99	Sodium, Miscellaneous (%)	3	3	0.5767	0.0318	0.5767	0.0318	0.0225	5.51%	0.0067	4.35%
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.5605	0.0347						
035.01	Sodium, Ion-selective electrode (%)	1	1	0.5980							
035.02	Sodium, Em Spect (%)	1	1	0.5650							
035.32	Sodium, AAS, Open vessel (%)	1	1	0.4750							
035.33	Sodium, AAS, Microwave (%)	1	1	0.6150							
036.42	Sulfur, ICP, Open vessel (%)	18	17	0.3837	0.0181	0.3827	0.0178	0.0054	4.66%	0.0103	4.62%
036.43	Sulfur, ICP, Microwave (%)	14	13	0.4057	0.0257	0.4050	0.0276	0.0096	6.82%	0.0170	4.58%
036.04	Sulfur, LECO (%)	2	2	0.3700	0.0212						
036.52	Sulfur, ICP-MS, Open vessel (%)	2	2	0.3872	0.0095						
036.53	Sulfur, ICP-MS, Microwave (%)	2	2	0.4055	0.0120						
036.00	Sulfur, Gravimetric (%)	1	1	0.3938							
036.01	Sulfur, Analyzer (%)	1	1	0.4000							
036.99	Sulfur, Miscellaneous (%)	1	1	0.3500							

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037.43	Zinc, ICP, Microwave (ppm)	24	23	176.3	13.49	176.0	14.38	3.749	8.18%	5.860	7.35%
037.42	Zinc, ICP, Open vessel (ppm)	19	18	172.7	20.81	171.3	20.04	5.906	11.70%	3.452	7.38%
037.41	Zinc, ICP, Dry ash (ppm)	17	17	172.7	14.68	172.2	12.11	3.671	7.03%	3.810	7.37%
037.31	Zinc, AAS, Dry ash (ppm)	15	14	170.3	11.17	171.0	10.87	3.632	6.36%	4.605	7.38%
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	138.3	69.54	156.1	32.83	16.75	21.03%	10.94	7.48%
037.44	Zinc, ICP, Dry ash (ppm)	3	3	164.2	5.154	164.2	5.154	2.976	3.14%	4.699	7.42%
037.99	Zinc, Miscellaneous (ppm)	4	3	176.6	17.49	176.6	17.49	10.09	9.90%	0.4820	7.34%
037.33	Zinc, AAS, Microwave (ppm)	2	2	175.0	7.044						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	176.3							
037.51	Zinc, ICP-MS, Dry ash (ppm)	1	1	168.1							
037.52	Zinc, ICP-MS, Open vessel (ppm)	1	1	178.5							
038.43	Molybdenum, ICP, Microwave (ppm)	9	7	0.8745	0.1557	0.8461	0.1033	0.0488	12.21%	0.0219	16.40%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	5	4	0.9787	0.1116	0.9787	0.1116	0.0558	11.41%	0.0241	16.05%
038.42	Molybdenum, ICP, Open vessel (ppm)	4	3	1.242	0.2851	1.242	0.2851	0.1646	22.96%	0.0500	15.48%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	0.9469	0.1953						
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	1	1	0.9700							
040.53	Barium, ICP-MS, Microwave (ppm)	2	2	6.151	0.1515						
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	0.1995							
042.00	Chloride, Titrimetric (%)	2	2	0.7293	0.0004						
042.99	Chloride, Miscellaneous (%)	1	1	0.7850							
101.99	Choline Chloride, Miscellaneous (ppm)	1	1	3,980							
102.01	Niacin, Microbiological (ppm)	1	1	133.5							
102.02	Niacin, LC (ppm)	1	1	143.2							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	38.15							
103.02	Pantothenic Acid, LC (ppm)	1	1	94.90							
104.03	Riboflavin, LC (ppm)	2	2	15.96	2.783						
104.00	Riboflavin, Fluorometric (ppm)	1	1	20.65							
105.00	Thiamine, LC (ppm)	2	2	224.1	11.90						
105.01	Thiamine, Fluorometer (ppm)	1	1	188.5							
106.02	Vitamin A, LC (KU / kg)	19	18	13.29	2.917	13.12	2.772	0.8167	21.13%	0.9159	
106.99	Vitamin A, Miscellaneous (KU / kg)	2	2	10.44	1.176						
106.00	Vitamin A, Color (KU / kg)	1	1	14.60							
106.01	Vitamin A, UV (KU / kg)	1	1	15.70							
107.00	Vitamin B12, Microbiological (ppb)	1	1	141.0							
108.02	Vitamin D3, LC (KU / kg)	5	4	1.589	0.8472	1.589	0.8472	0.4236	53.32%	0.0925	
108.99	Vitamin D3, Miscellaneous (KU / kg)	4	4	1.924	0.5725	1.924	0.5725	0.2863	29.76%	0.1825	
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	6.500							
109.02	Vitamin E, LC (IU / kg)	16	16	307.5	63.77	311.1	63.30	19.78	20.34%	20.05	
109.99	Vitamin E, Miscellaneous (IU / kg)	1	1	547.5							
111.01	Vitamin C, Ascorbic Acid, LC (ppm)	4	3	18.03	14.63	18.03	14.63	8.444	81.13%	0.5067	10.35%

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111.00	Vitamin C, Phosphorylated, LC (ppm)	1	1	60.25							
111.99	Vitamin C, Phosphorylated, Miscellaneous (ppm)	1		60.00							
112.01	Pyridoxine, LC (µg / g)	2	2	15.39	3.444						
113.01	Folic Acid, Micro (ppm)	1	1	4.390							
114.01	Biotin, Microbiological (ppm)	1	1	0.3600							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	2.680							
120.00	Alanine, Post-col Ninhydrin Der (%)	20	20	1.974	0.0901	1.979	0.0765	0.0214	3.86%	0.0320	3.61%
120.05	Alanine, Pre-col AQC Der (%)	6	6	1.963	0.1166	1.963	0.1322	0.0675	6.73%	0.0655	3.61%
120.99	Alanine, Miscellaneous (%)	3	3	1.832	0.3052	1.832	0.3052	0.1762	16.66%	0.0187	3.65%
120.02	Alanine, Post-col OPA Der (%)	1	1	1.966							
121.00	Arginine, Post-col Ninhydrin Der (%)	20	20	1.824	0.0796	1.822	0.0672	0.0188	3.69%	0.0242	3.65%
121.05	Arginine, Pre-col AQC Der (%)	6	6	1.827	0.1856	1.824	0.2046	0.1044	11.21%	0.0582	3.65%
121.99	Arginine, Miscellaneous (%)	3	3	1.687	0.3168	1.687	0.3168	0.1829	18.78%	0.0207	3.70%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.816							
122.00	Aspartic, Post-col Ninhydrin Der (%)	20	20	2.592	0.1198	2.593	0.0978	0.0273	3.77%	0.0467	3.47%
122.05	Aspartic, Pre-col AQC Der (%)	6	6	2.531	0.1698	2.531	0.1925	0.0983	7.61%	0.0548	3.48%
122.99	Aspartic, Miscellaneous (%)	3	3	2.668	0.1258	2.668	0.1258	0.0726	4.72%	0.0420	3.45%
122.02	Aspartic, Post-col OPA Der (%)	1	1	2.608							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	21	21	0.4583	0.0683	0.4512	0.0445	0.0121	9.86%	0.0096	4.51%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	5	4	0.4581	0.0087	0.4581	0.0087	0.0050	1.90%	0.0058	4.50%
124.99	Cysteine/Cystine, Miscellaneous (%)	3	3	0.4278	0.0204	0.4278	0.0204	0.0118	4.77%	0.0037	4.54%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.4715							
125.00	Glutamic, Post-col Ninhydrin Der (%)	20	20	5.325	0.2548	5.300	0.1732	0.0484	3.27%	0.0740	3.11%
125.05	Glutamic, Pre-col AQC Der (%)	6	6	5.406	0.3251	5.406	0.3687	0.1881	6.82%	0.1497	3.10%
125.99	Glutamic, Miscellaneous (%)	2	2	5.062	0.5201						
125.02	Glutamic, Post-col OPA Der (%)	1	1	5.231							
126.00	Glycine, Post-col Ninhydrin Der (%)	20	20	1.949	0.0805	1.948	0.0727	0.0203	3.73%	0.0291	3.62%
126.05	Glycine, Pre-col AQC Der (%)	6	6	1.977	0.2356	1.954	0.2109	0.1076	10.79%	0.0758	3.62%
126.99	Glycine, Miscellaneous (%)	3	3	1.494	0.7706	1.494	0.7706	0.4449	51.59%	0.0103	3.77%
126.02	Glycine, Post-col OPA Der (%)	1	1	1.981							
127.00	Histidine, Post-col Ninhydrin Der (%)	20	20	0.7081	0.0540	0.7042	0.0470	0.0131	6.67%	0.0097	4.22%
127.05	Histidine, Pre-col AQC Der (%)	6	6	0.6539	0.0357	0.6539	0.0405	0.0207	6.19%	0.0178	4.26%
127.99	Histidine, Miscellaneous (%)	3	3	0.7138	0.1139	0.7138	0.1139	0.0657	15.95%	0.0123	4.21%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.6860							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	20	19	1.202	0.1069	1.226	0.0470	0.0135	3.83%	0.0193	3.88%
128.05	Isoleucine, Pre-col AQC Der (%)	6	6	1.234	0.0812	1.234	0.0921	0.0470	7.46%	0.0522	3.88%
128.99	Isoleucine, Miscellaneous (%)	3	3	1.290	0.0444	1.290	0.0444	0.0256	3.44%	0.0197	3.85%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	1.243							
129.00	Leucine, Post-col Ninhydrin Der (%)	20	20	2.905	0.1208	2.896	0.1079	0.0302	3.72%	0.0344	3.41%
129.05	Leucine, Pre-col AQC Der (%)	6	6	2.936	0.3188	2.895	0.2615	0.1335	9.03%	0.1233	3.41%

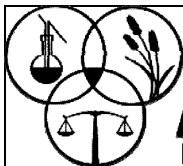
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129.99	Leucine, Miscellaneous (%)	3	3	2.956	0.1407	2.956	0.1407	0.0812	4.76%	0.0387	3.40%
129.02	Leucine, Post-col OPA Der (%)	1	1	2.874							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	22	22	1.493	0.0765	1.483	0.0532	0.0142	3.59%	0.0245	3.77%
130.05	L-Lysine, Pre-col AQC Der (%)	6	6	1.460	0.0944	1.460	0.1071	0.0546	7.33%	0.0697	3.78%
130.99	L-Lysine, Miscellaneous (%)	4	4	1.652	0.3705	1.652	0.3705	0.1853	22.44%	0.0200	3.71%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.575							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	21	21	0.5637	0.0770	0.5656	0.0330	0.0090	5.84%	0.0089	4.36%
131.05	Methionine, PAO Pre-col AQC Der (%)	6	6	0.5671	0.0502	0.5766	0.0332	0.0169	5.75%	0.0275	4.35%
131.99	Methionine, Miscellaneous (%)	4	4	0.6784	0.1211	0.6784	0.1211	0.0605	17.85%	0.0108	4.24%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.5740							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	20	20	1.480	0.0919	1.471	0.0757	0.0212	5.15%	0.0252	3.77%
132.05	Phenylalanine, Pre-col AQC Der (%)	6	6	1.501	0.2044	1.470	0.1557	0.0795	10.59%	0.0702	3.77%
132.99	Phenylalanine, Miscellaneous (%)	3	3	1.445	0.0635	1.445	0.0635	0.0367	4.39%	0.0097	3.78%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	1.469							
133.00	Proline, Post-col Ninhydrin Der (%)	20	20	2.122	0.2734	2.159	0.0766	0.0214	3.55%	0.0626	3.56%
133.05	Proline, Pre-col AQC Der (%)	6	6	2.143	0.1149	2.145	0.1259	0.0642	5.87%	0.0828	3.57%
133.99	Proline, Miscellaneous (%)	3	3	2.113	0.0413	2.113	0.0413	0.0238	1.95%	0.0197	3.57%
134.00	Serine, Post-col Ninhydrin Der (%)	20	20	1.468	0.0808	1.462	0.0751	0.0210	5.14%	0.0303	3.78%
134.05	Serine, Pre-col AQC Der (%)	6	6	1.319	0.1354	1.353	0.0671	0.0343	4.96%	0.0650	3.82%
134.99	Serine, Miscellaneous (%)	3	3	1.509	0.0600	1.509	0.0600	0.0347	3.98%	0.0197	3.76%
134.02	Serine, Post-col OPA Der (%)	1	1	1.320							
135.00	Threonine, Post-col Ninhydrin Der (%)	20	20	1.164	0.0493	1.159	0.0347	0.0097	3.00%	0.0174	3.91%
135.05	Threonine, Pre-col AQC Der (%)	6	6	1.105	0.0558	1.105	0.0632	0.0323	5.72%	0.0362	3.94%
135.99	Threonine, Miscellaneous (%)	3	3	1.197	0.0142	1.197	0.0142	0.0082	1.18%	0.0240	3.89%
135.02	Threonine, Post-col OPA Der (%)	1	1	1.160							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	7	7	0.2920	0.0526	0.2938	0.0555	0.0262	18.87%	0.0112	4.81%
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	7	7	0.3321	0.0343	0.3249	0.0202	0.0095	6.21%	0.0054	4.74%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	4	4	0.3325	0.0185	0.3325	0.0185	0.0093	5.57%	0.0043	4.72%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.3020							
136.05	Tryptophan, Pre-col AQC Der (%)	1	1	0.2380							
136.99	Tryptophan, Miscellaneous (%)	1	1	0.5800							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	13	1.109	0.1008	1.116	0.0926	0.0321	8.30%	0.0246	3.93%
137.05	Tyrosine, Pre-col AQC Der (%)	6	5	1.102	0.0831	1.102	0.0831	0.0465	7.54%	0.0458	3.94%
137.99	Tyrosine, Miscellaneous (%)	3	3	0.8863	0.2690	0.8863	0.2690	0.1553	30.35%	0.0213	4.07%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	1.116							
138.00	Valine, Post-col Ninhydrin Der (%)	20	19	1.385	0.1139	1.408	0.0683	0.0196	4.85%	0.0254	3.80%
138.05	Valine, Pre-col AQC Der (%)	6	5	1.384	0.2035	1.384	0.2035	0.1138	14.71%	0.0370	3.81%
138.99	Valine, Miscellaneous (%)	3	3	1.335	0.2552	1.335	0.2552	0.1473	19.11%	0.0253	3.83%
138.02	Valine, Post-col OPA Der (%)	1	1	1.489							
139.99	Taurine, Miscellaneous (%)	5	5	0.1937	0.0804	0.1937	0.0804	0.0359	41.50%	0.0038	5.12%

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139.00	Taurine, Post-col Ninhydrin Der (%)	3	3	0.1538	0.0488	0.1538	0.0488	0.0345	31.72%	0.0003	5.30%
139.05	Taurine, Pre-col AQC Der (%)	4	3	0.1447	0.0064	0.1447	0.0064	0.0037	4.44%	0.0120	5.35%
139.02	Taurine, Post-col OPA Der (%)	1	1	0.1520							
160.99	Fructose, Miscellaneous (%)	3	3	0.2027	0.1061	0.2027	0.1061	0.0613	52.36%	0.0094	5.09%
160.10	Fructose, HPAEC PAD (%)	1	1	0.1225							
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.99	Glucose, Miscellaneous (%)	3	2	0.2005	0.0488	0.2005	0.0488			0.0050	5.09%
162.10	Glucose, HPAEC PAD (%)	1	1	0.1430							
163.10	Lactose, HPAEC PAD (%)	1		0.0000							
163.99	Lactose, Miscellaneous (%)	3									
164.10	Maltose, HPAEC PAD (%)	1	1	0.2330							
164.99	Maltose, Miscellaneous (%)	2	1	0.3000							
165.99	Sucrose, Miscellaneous (%)	3	3	1.229	0.0062	1.229	0.0062	0.0036	0.50%	0.0339	3.88%
165.10	Sucrose, HPAEC PAD (%)	1	1	1.219							
166.99	Raffinose, Miscellaneous (%)	2	2	0.2108	0.0060						
166.10	Raffinose, HPAEC PAD (%)	1	1	0.2210							
167.99	Stachyose, Miscellaneous (%)	2	2	0.8063	0.0124						
167.10	Stachyose, HPAEC PAD (%)	1	1	0.7325							
400.01	Water Activity, Aqualab chilled mirror (Units)	10	10	0.4799	0.0467	0.4684	0.0170	0.0067	3.63%	0.0071	
400.99	Water Activity, Miscellaneous (Units)	3	3	0.4737	0.0151	0.4737	0.0151	0.0087	3.19%	0.0067	
516.53	Arsenic, Total, ICP-MS, Microwave (ppm)	4	4	0.0652	0.0228	0.0652	0.0228	0.0114	35.01%	0.0061	22.00%
516.43	Arsenic, Total, ICP, Microwave (ppm)	3	1								
516.52	Arsenic, Total, ICP-MS, Open vessel (ppm)	2	1	0.0500							
518.53	Cadmium, ICP-MS, Microwave (ppm)	5	5	0.0341	0.0019	0.0341	0.0019	0.0008	5.58%	0.0023	22.00%
518.43	Cadmium, ICP, Microwave (ppm)	4	2	0.0353	0.0152	0.0353	0.0152			0.0005	22.00%
518.41	Cadmium, ICP, Dry ash (ppm)	1	1	0.2104							
518.52	Cadmium, ICP-MS, Open vessel (ppm)	2	1	0.0350							
518.31	Cadmium, AAS, Dry ash (ppm)	1		0.2000							
520.53	Chromium, ICP-MS, Microwave (ppm)	4	4	0.7030	0.2155	0.7030	0.2155	0.1078	30.66%	0.0900	16.87%
520.43	Chromium, ICP, Microwave (ppm)	3	3	0.9525	0.4513	0.9525	0.4513	0.2605	47.38%	0.0270	16.11%
520.42	Chromium, ICP, Open vessel (ppm)	2	2	1.006	0.1174						
520.52	Chromium, ICP-MS, Open vessel (ppm)	1	1	0.3044							
526.53	Lead, ICP-MS, Microwave (ppm)	4	3	0.1785	0.0041	0.1785	0.0041	0.0024	2.32%	0.0067	20.73%
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.1138							
526.43	Lead, ICP, Microwave (ppm)	2	1	0.2050							
526.52	Lead, ICP-MS, Open vessel (ppm)	1	1	0.1850							
526.31	Lead, AAS, Dry ash (ppm)	1		0.2000							
529.99	Mercury, Miscellaneous (ppb)	4	2	2,610	3,688	2,610	3,688			1,358	13.85%
539.53	Nickel, ICP-MS, Microwave (ppm)	3	3	2.159	0.2670	2.159	0.2670	0.1542	12.37%	0.1847	14.25%
539.41	Nickel, ICP, Dry ash (ppm)	1	1	0.6863							

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
539.43	Nickel, ICP, Microwave (ppm)	1	1	1.900							
539.52	Nickel, ICP-MS, Open vessel (ppm)	1	1	1.772							
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1		0.0000							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	1		0.0000							
706.01	Caprylic acid (8:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
708.01	Capric acid (10:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0160							
710.01	Lauric Acid (12:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0215							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	3	1								
714.99	Myristic Acid (14:0) , Miscellaneous (% (w/w))	3	3	0.1585	0.0126	0.1585	0.0126	0.0089	7.96%	0.0037	5.28%
714.01	Myristic Acid (14:0) , Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.1165							
714.02	Myristic Acid (14:0) , Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.1465							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	3	3	1.415	0.9849	1.415	0.9849	0.5686	69.60%	0.0093	3.80%
716.01	Palmitic Acid (16:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	2.155							
716.02	Palmitic Acid (16:0), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	1.933							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	2	2	0.2800	0.0495						
718.01	Palmitoleic Acid (9c-16:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.2400							
718.02	Palmitoleic Acid (9c-16:1), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.2685							
720.02	Margaric acid (17:0), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.0729							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	3	3	1.156	0.0821	1.156	0.0821	0.0474	7.10%	0.0163	3.91%
722.01	Stearic Acid (18:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.190							
722.02	Stearic Acid (18:0), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	1.087							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	3	3	3.048	0.4913	3.048	0.4913	0.2836	16.12%	0.0657	3.38%
724.01	Oleic Acid (9c-18:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	4.150							
724.02	Oleic Acid (9c-18:1), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	2.806							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	3	3	1.425	0.3907	1.425	0.3907	0.2256	27.42%	0.0477	3.79%
726.02	Linoleic Acid (9c,12c-18:2), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	2	2	1.451	0.1054						
726.01	Linoleic Acid (9c,12c-18:2), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.620							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	3	3	0.0793	0.0254	0.0793	0.0254	0.0147	32.04%	0.0060	5.86%
728.01	alpha-Linolenic Acid (9c,12c,15c-18:3), Direct Methylation by Alkali Hydrolysis	1	1	0.0695							
728.02	alpha-Linolenic Acid (9c,12c,15c-18:3), Direct Methylation by Acid-Alkali Hydrolysis	1	1	0.0790							
730.01	Arachidic Acid (20:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0275							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	2	1	0.0180							
730.02	Arachidic Acid (20:0), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	2	2	0.0295	0.0064						
732.01	Gondoic Acid (11c-20:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0320							
732.02	Gondoic Acid (11c-20:1), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.0235							
736.01	Arachidonic Acid (5c,8c,11c,14c-20:4), Direct Methylation by Alkali Hydrolysis	1	1	0.0415							
738.01	Mead Acid (11c,14c,17c-20:3), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
740.01	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Direct Methylation by Alkali Hydrolysis	1		0.0000							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), 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 (R-bar)	Thompson Horwitz %RSD
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	2	1	0.0105							
744.02	Erucic Acid (13c-22:1), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.0484							
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))	1		0.0050							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w))	1	1	0.0050							
746.01	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	1	1	0.0105							
750.01	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
750.02	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	2		0.0050							
752.01	Nervonic Acid (24:1) isomers, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0000							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1		0.0050							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	2	2	0.0875	0.0318						
754.02	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.0989							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	2	2	1.383	0.4844						
756.01	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.595							
756.02	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	1.659							
758.02	Total Saturated Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	2	2	3.413	0.1872						
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	3.720							
762.02	Total Monounsaturated Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	2	2	3.458	0.1171						
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	3.710							
766.02	Total Polyunsaturated Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	2	2	1.622	0.1913						
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.860							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	10.16							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	3	3	8.626	1.550	8.626	1.550	0.8946	17.96%	0.1510	2.89%
772.02	Total Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	2	2	8.494	0.2606						

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

Dry Cat Feed

Test Material Code # 202023

Method Precision Report

Methods Reported: 90

Labs Reporting: 190

Issue Date : 04/30/2020

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
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	50	47	7.487	0.2796	0.2135	0.0976	0.2348	2.85%	1.30%	3.14%	2.406
001.99	Loss on Drying, Miscellaneous (%)	20	19	7.262	0.5459	0.3308	0.1254	0.3538	4.50%	1.70%	4.81%	2.820
002.01	Protein, Crude, Auto Kjel-Foss (%)	18	16	31.65	0.4357	0.2210	0.1747	0.2817	0.70%	0.55%	0.89%	1.612
002.05	Protein, Crude, Copper, Boric Acid (%)	27	24	31.56	0.4291	0.3320	0.0983	0.3463	1.05%	0.31%	1.10%	3.521
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	132	125	32.04	0.3929	0.2816	0.1857	0.3373	0.88%	0.58%	1.05%	1.817
003.06	Fat, Crude, Pet Ether (%)	14	13	7.773	0.8115	0.1292	0.1567	0.2031	1.71%	2.07%	2.69%	1.296
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	14	13	7.821	1.066	0.3060	0.1442	0.3383	4.05%	1.91%	4.48%	2.347
003.10	Fat, Crude, Randall, Pet Ether (%)	26	24	7.533	0.1359	0.1305	0.0645	0.1456	1.73%	0.86%	1.93%	2.256
003.14	Fat, Crude, Ankom (%)	41	37	7.804	0.7564	0.1875	0.1015	0.2133	2.47%	1.34%	2.81%	2.100
004.00	Fiber, Crude, Asbestos Free (%)	13	12	4.859	0.5273	0.5050	0.2143	0.5486	10.39%	4.41%	11.29%	2.560
004.06	Fiber, Crude, Fibertec (%)	19	18	4.892	0.4997	0.4934	0.1452	0.5144	10.13%	2.98%	10.56%	3.543
004.07	Fiber, Crude, ANKOM (%)	69	63	4.648	1.129	0.7620	0.1833	0.7837	16.70%	4.02%	17.18%	4.276
005.00	Ash, 2h @ 600°C (%)	87	83	6.862	0.1593	0.0925	0.0684	0.1150	1.35%	1.00%	1.68%	1.682
005.05	Ash, 3h @ 550°C (%)	29	26	6.919	0.1370	0.0989	0.0513	0.1114	1.43%	0.74%	1.61%	2.170
008.02	Fiber, Acid Detergent, Crucible (%)	10	9	6.565	0.9290	0.5905	0.2128	0.6277	8.69%	3.13%	9.24%	2.949
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	41	39	6.886	1.570	1.403	0.3167	1.438	20.74%	4.68%	21.27%	4.542
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	13.08	1.393	1.379	0.2755	1.406	10.54%	2.11%	10.75%	5.104
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	41	39	14.77	2.364	2.360	0.4249	2.398	15.94%	2.87%	16.19%	5.644
010.99	Moisture, Miscellaneous (%)	18	16	7.619	0.5367	0.2640	0.0832	0.2768	3.47%	1.09%	3.64%	3.325
011.01	Loss on Drying, 135°C 2hr (%)	65	58	8.065	0.3489	0.2421	0.0647	0.2505	2.98%	0.80%	3.09%	3.874
012.00	Starch, Polarimetric (Ewers) (%)	13	13	27.66	0.9523	0.9363	0.2452	0.9679	3.39%	0.89%	3.50%	3.947
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	12	9	26.66	3.199	1.951	0.3977	1.991	7.56%	1.54%	7.71%	5.007
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	27	24	10.88	0.7719	0.4146	0.1458	0.4395	3.87%	1.36%	4.10%	3.015
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	25	24	11.00	0.7585	0.3333	0.1494	0.3653	2.99%	1.34%	3.28%	2.445
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	10	8	10.08	0.5800	0.2627	0.1211	0.2893	2.55%	1.18%	2.81%	2.389
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	15	13	10.72	0.3243	0.3267	0.1196	0.3480	3.05%	1.12%	3.25%	2.909
015.43	Aluminum, ICP, Microwave (ppm)	9	8	44.32	6.828	6.756	1.390	6.898	15.25%	3.14%	15.56%	4.962
019.31	Calcium, AAS, Dry ash (%)	17	17	1.227	0.0871	0.0831	0.0370	0.0910	6.77%	3.02%	7.41%	2.458
019.41	Calcium, ICP, Dry ash (%)	26	24	1.234	0.0791	0.0670	0.0308	0.0737	5.46%	2.51%	6.01%	2.394
019.42	Calcium, ICP, Open vessel (%)	19	17	1.275	0.1117	0.1110	0.0253	0.1138	8.75%	2.00%	8.97%	4.490
019.43	Calcium, ICP, Microwave (%)	26	24	1.263	0.0841	0.0678	0.0299	0.0741	5.41%	2.39%	5.91%	2.476
019.44	Calcium, ICP, Dry ash (%)	9	9	1.210	0.0234	0.0118	0.0286	0.0309	0.98%	2.36%	2.56%	1.082
022.31	Copper, AAS, Dry ash (ppm)	12	11	14.51	3.073	3.037	0.6583	3.108	20.93%	4.54%	21.42%	4.721
022.41	Copper, ICP, Dry ash (ppm)	18	17	14.74	1.711	1.709	0.5843	1.806	11.62%	3.97%	12.28%	3.092
022.42	Copper, ICP, Open vessel (ppm)	21	19	13.87	1.238	0.6788	0.7393	1.004	4.84%	5.27%	7.16%	1.358
022.43	Copper, ICP, Microwave (ppm)	23	19	13.61	1.382	0.7262	0.4443	0.8513	5.39%	3.29%	6.31%	1.916

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
025.31	Iron, AAS, Dry ash (ppm)	15	14	211.6	75.78	25.82	10.02	27.70	13.37%	5.19%	14.34%	2.765
025.41	Iron, ICP, Dry ash (ppm)	22	19	189.5	29.40	14.33	6.459	15.72	7.86%	3.54%	8.62%	2.433
025.42	Iron, ICP, Open vessel (ppm)	17	17	196.8	11.46	9.082	9.890	13.43	4.61%	5.03%	6.82%	1.358
025.43	Iron, ICP, Microwave (ppm)	25	24	203.0	20.68	14.97	9.321	17.63	7.47%	4.65%	8.80%	1.892
027.31	Magnesium, AAS, Dry ash (%)	9	8	0.1413	0.0306	0.0080	0.0045	0.0091	6.06%	3.39%	6.94%	2.051
027.41	Magnesium, ICP, Dry ash (%)	17	17	0.1314	0.0087	0.0075	0.0062	0.0098	5.73%	4.72%	7.43%	1.573
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.1273	0.0137	0.0082	0.0035	0.0089	6.32%	2.67%	6.86%	2.572
027.43	Magnesium, ICP, Microwave (%)	22	19	0.1290	0.0099	0.0043	0.0066	0.0079	3.34%	5.11%	6.10%	1.195
028.31	Manganese, AAS, Dry ash (ppm)	14	12	56.12	31.04	5.364	1.526	5.576	11.26%	3.20%	11.71%	3.655
028.41	Manganese, ICP, Dry ash (ppm)	16	15	54.00	8.060	2.155	1.769	2.788	4.14%	3.40%	5.35%	1.576
028.42	Manganese, ICP, Open vessel (ppm)	21	18	51.67	6.126	2.978	0.9880	3.138	5.66%	1.88%	5.97%	3.175
028.43	Manganese, ICP, Microwave (ppm)	24	21	52.36	4.545	3.849	1.207	4.033	7.32%	2.30%	7.67%	3.343
031.01	Phosphorus, Photometric (%)	28	25	1.069	0.0387	0.0325	0.0131	0.0351	3.03%	1.22%	3.27%	2.681
031.41	Phosphorus, ICP, Dry ash (%)	24	23	1.113	0.0919	0.0593	0.0384	0.0707	5.40%	3.49%	6.43%	1.840
031.42	Phosphorus, ICP, Open vessel (%)	20	18	1.107	0.0708	0.0478	0.0434	0.0645	4.36%	3.96%	5.88%	1.487
031.43	Phosphorus, ICP, Microwave (%)	27	24	1.110	0.0589	0.0509	0.0167	0.0536	4.62%	1.51%	4.86%	3.212
031.44	Phosphorus, ICP, Dry ash (%)	9	8	1.074	0.0396	0.0216	0.0157	0.0267	2.03%	1.47%	2.51%	1.706
032.41	Potassium, ICP, Dry ash (%)	19	17	0.7571	0.0444	0.0421	0.0125	0.0439	5.53%	1.64%	5.77%	3.519
032.42	Potassium, ICP, Open vessel (%)	17	14	0.7686	0.0497	0.0305	0.0137	0.0334	3.96%	1.78%	4.34%	2.435
032.43	Potassium, ICP, Microwave (%)	21	18	0.7698	0.0406	0.0305	0.0137	0.0334	3.95%	1.77%	4.32%	2.443
033.00	Salt as chloride, Sol Cl (%)	15	14	1.128	0.0691	0.0678	0.0186	0.0703	6.01%	1.65%	6.24%	3.779
033.01	Salt as chloride, Poten Cl (%)	18	17	1.199	0.0902	0.0460	0.0152	0.0484	3.90%	1.29%	4.10%	3.182
033.99	Salt, Miscellaneous (%)	9	8	1.255	0.2287	0.1969	0.0177	0.1977	16.28%	1.46%	16.34%	11.19
034.53	Selenium, ICP-MS, Microwave (ppm)	10	8	0.6523	0.1183	0.0524	0.0486	0.0714	8.47%	7.86%	11.56%	1.471
035.31	Sodium, AAS, Dry ash (%)	11	9	0.6030	0.1402	0.0312	0.0090	0.0325	5.45%	1.58%	5.68%	3.593
035.41	Sodium, ICP, Dry ash (%)	32	30	0.5802	0.0350	0.0300	0.0136	0.0330	5.21%	2.36%	5.72%	2.420
035.42	Sodium, ICP, Open vessel (%)	17	15	0.5757	0.0474	0.0441	0.0145	0.0464	7.72%	2.53%	8.12%	3.206
035.43	Sodium, ICP, Microwave (%)	25	24	0.5994	0.0570	0.0278	0.0286	0.0399	4.72%	4.85%	6.76%	1.396
036.42	Sulfur, ICP, Open vessel (%)	18	16	0.3837	0.0181	0.0175	0.0076	0.0190	4.54%	1.97%	4.95%	2.514
036.43	Sulfur, ICP, Microwave (%)	14	13	0.4057	0.0257	0.0237	0.0137	0.0274	5.85%	3.39%	6.76%	1.996
037.31	Zinc, AAS, Dry ash (ppm)	15	14	170.3	11.17	10.76	4.238	11.56	6.32%	2.49%	6.79%	2.728
037.41	Zinc, ICP, Dry ash (ppm)	17	16	172.7	14.68	14.90	3.039	15.21	8.65%	1.76%	8.83%	5.004
037.42	Zinc, ICP, Open vessel (ppm)	19	16	172.7	20.81	16.89	2.726	17.10	9.94%	1.61%	10.07%	6.273
037.43	Zinc, ICP, Microwave (ppm)	24	22	176.3	13.49	12.97	5.259	14.00	7.38%	2.99%	7.97%	2.662
106.02	Vitamin A, LC (KU / kg)	19	17	13.29	2.917	2.687	0.7104	2.780	20.66%	5.46%	21.37%	3.913
109.02	Vitamin E, LC (IU / kg)	16	14	307.5	63.77	51.35	17.00	54.09	16.30%	5.40%	17.17%	3.182
120.00	Alanine, Post-col Ninhydrin Der (%)	20	19	1.974	0.0901	0.0654	0.0327	0.0731	3.29%	1.65%	3.68%	2.234
121.00	Arginine, Post-col Ninhydrin Der (%)	20	19	1.824	0.0796	0.0620	0.0211	0.0655	3.42%	1.16%	3.61%	3.103
122.00	Aspartic, Post-col Ninhydrin Der (%)	20	18	2.592	0.1198	0.0704	0.0409	0.0815	2.72%	1.58%	3.14%	1.991
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	21	19	0.4583	0.0683	0.0400	0.0089	0.0409	8.82%	1.96%	9.04%	4.613
125.00	Glutamic, Post-col Ninhydrin Der (%)	20	17	5.325	0.2548	0.1673	0.0480	0.1741	3.18%	0.91%	3.31%	3.630
126.00	Glycine, Post-col Ninhydrin Der (%)	20	17	1.949	0.0805	0.0682	0.0156	0.0700	3.53%	0.81%	3.62%	4.477
127.00	Histidine, Post-col Ninhydrin Der (%)	20	18	0.7081	0.0540	0.0426	0.0087	0.0434	6.09%	1.25%	6.22%	4.979
128.00	Isoleucine, Post-col Ninhydrin Der (%)	20	17	1.202	0.1069	0.0612	0.0158	0.0632	5.02%	1.30%	5.18%	3.991
129.00	Leucine, Post-col Ninhydrin Der (%)	20	18	2.905	0.1208	0.0970	0.0249	0.1002	3.36%	0.86%	3.47%	4.017
130.00	L-Lysine, Post-col Ninhydrin Der (%)	22	21	1.493	0.0765	0.0433	0.0229	0.0490	2.93%	1.55%	3.31%	2.138

Test Material Code # 202023

Issue Date : 04/30/2020

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
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	21	19	0.5637	0.0770	0.0299	0.0081	0.0309	5.26%	1.43%	5.45%	3.815
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	20	19	1.480	0.0919	0.0707	0.0243	0.0748	4.82%	1.66%	5.10%	3.073
133.00	Proline, Post-col Ninhydrin Der (%)	20	18	2.122	0.2734	0.1697	0.0517	0.1774	7.82%	2.38%	8.17%	3.432
134.00	Serine, Post-col Ninhydrin Der (%)	20	19	1.468	0.0808	0.0590	0.0286	0.0656	4.05%	1.96%	4.50%	2.293
135.00	Threonine, Post-col Ninhydrin Der (%)	20	19	1.164	0.0493	0.0287	0.0166	0.0332	2.49%	1.43%	2.87%	2.003
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	11	1.109	0.1008	0.0730	0.0117	0.0739	6.51%	1.04%	6.59%	6.320
138.00	Valine, Post-col Ninhydrin Der (%)	20	17	1.385	0.1139	0.0948	0.0206	0.0970	6.75%	1.46%	6.91%	4.718
400.01	Water Activity, Aqualab chilled mirror (Units)	10	8	0.4799	0.0467	0.0124	0.0053	0.0135	2.65%	1.13%	2.88%	2.560

Notes: Precision Calculations provided for methods with 8 or more labs used in calculations.