



AAFCO
Association of American Feed Control Officials



Animal Feed Scheme
Dry Cat Feed
Test Material Code # 202232

Method Summary Report
(Precision Report Follows)

Labs Reporting: 183
Methods Reported: 386
Issue Date : 01/31/2023

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO #fp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	1	1	0.1000							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	59	56	6.838	0.2405	6.842	0.2489	0.0416	3.64%	0.0834	2.99%
001.99	Loss on Drying, Miscellaneous (%)	18	17	6.789	0.7850	6.896	0.3420	0.1037	4.96%	0.0987	2.99%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	6	6	6.948	0.1351	6.986	0.0512	0.0261	0.73%	0.0934	2.99%
001.03	Loss on Drying, Low temp. methods (%)	3	3	6.673	0.5577	6.673	0.5577	0.3220	8.36%	0.1933	3.01%
001.05	Loss on Drying, LECO (%)	1	1	7.006							
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	1	1	7.233							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	138	136	31.66	0.4297	31.65	0.3136	0.0336	0.99%	0.2842	1.78%
002.05	Protein, Crude, Copper, Boric Acid (%)	23	23	31.12	0.3497	31.13	0.3735	0.0974	1.20%	0.1224	1.79%
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	15	31.31	0.3955	31.33	0.3493	0.1127	1.11%	0.1609	1.79%
002.00	Protein, Crude, Crude (%)	2	2	31.36	0.0354						
002.04	Protein, Crude, Copper Catalyst (%)	2	2	31.08	0.1732						
002.08	Protein, Crude, Cu/Ti (%)	2	2	31.46	0.0265						
002.11	Protein, Crude, NIR (%)	2	2	30.61	0.8945						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	1	1	31.38							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	31.05							
003.14	Fat, Crude, Ankom (%)	45	44	7.097	1.174	6.884	0.6382	0.1203	9.27%	0.1246	2.99%
003.10	Fat, Crude, Randall, Pet Ether (%)	28	27	6.774	0.4418	6.795	0.4544	0.1093	6.69%	0.1171	3.00%
003.06	Fat, Crude, Pet Ether (%)	16	16	7.031	1.067	6.833	0.5055	0.1580	7.40%	0.1606	3.00%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	9	8	6.619	0.4411	6.569	0.3750	0.1657	5.71%	0.1420	3.01%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	7	7	7.560	1.671	7.088	0.5858	0.2768	8.26%	0.1302	2.98%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	6	6	7.123	1.241	6.985	1.072	0.5472	15.35%	0.1227	2.99%
003.12	Fat, Crude, Hexane Ext (%)	4	4	7.148	0.6430	7.148	0.6430	0.3215	9.00%	0.1850	2.97%
003.99	Fat, Crude, Miscellaneous (%)	5	4	9.244	1.890	9.244	1.890	1.091	20.44%	0.0675	2.86%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	3	3	6.794	0.4837	6.794	0.4837	0.2793	7.12%	0.0302	3.00%
003.11	Fat, Crude, NIR (%)	2	2	8.438	0.7460						
004.07	Fiber, Crude, ANKOM (%)	71	69	1.974	0.5084	1.963	0.3726	0.0561	18.98%	0.1664	3.61%
004.06	Fiber, Crude, Fibertec (%)	21	21	1.996	0.3444	2.022	0.3173	0.0866	15.69%	0.1190	3.60%
004.00	Fiber, Crude, Asbestos Free (%)	14	14	2.298	1.085	1.989	0.3366	0.1124	16.92%	0.2073	3.61%

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004.03	Fiber, Crude, Fritted Glass (%)	6	6	2.680	1.290	2.680	1.463	0.7464	54.58%	0.1000	3.45%
004.11	Fiber, Crude, NIR (%)	1	1	1.940							
004.99	Fiber, Crude, Miscellaneous (%)	1	1	1.944							
005.00	Ash, 2h @ 600°C (%)	97	94	6.540	0.3093	6.518	0.1116	0.0144	1.71%	0.0888	3.02%
005.05	Ash, 3h @ 550°C (%)	35	35	6.540	0.0792	6.548	0.0696	0.0147	1.06%	0.0670	3.01%
005.99	Ash, Miscellaneous (%)	13	13	6.426	0.1651	6.445	0.1367	0.0474	2.12%	0.0688	3.02%
005.11	Ash, NIR (%)	3	3	7.595	1.730	7.595	1.730	0.9990	22.78%	0.1100	2.95%
005.03	Ash, Microwave furnace (%)	2	2	6.445	0.2051						
005.02	Ash, LECO (%)	1	1	6.584							
006.00	Total Sugars, As sucrose (%)	2	2	1.278	0.8167						
006.99	Total Sugars, Miscellaneous (%)	2	2	2.125	0.8132						
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	42	40	3.884	0.9596	3.922	0.8091	0.1599	20.63%	0.2332	3.26%
008.02	Fiber, Acid Detergent, Crucible (%)	13	13	3.694	0.7946	3.694	0.9010	0.3124	24.39%	0.1323	3.29%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	4	4	4.446	0.4438	4.446	0.4438	0.2219	9.98%	0.2825	3.20%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	38	37	11.81	2.996	11.90	2.127	0.4371	17.88%	0.5129	2.76%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	13	12	11.90	3.375	11.48	2.675	0.9653	23.30%	0.3193	2.77%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	2	2	12.18	1.188						
010.99	Moisture, Miscellaneous (%)	17	16	6.807	0.5572	6.920	0.3095	0.0967	4.47%	0.1138	2.99%
010.03	Moisture, Karl-Fischer (%)	2	2	7.273	0.5409						
010.11	Moisture, NIR (%)	1	1	6.965							
011.01	Loss on Drying, HT, 135°C 2hr (%)	67	65	7.543	0.3171	7.547	0.2635	0.0409	3.49%	0.0946	2.95%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	4	4	7.348	0.2353	7.348	0.2353	0.1176	3.20%	0.1450	2.96%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	4	4	7.245	0.4247	7.245	0.4247	0.2124	5.86%	0.2055	2.97%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	13	13	31.93	2.460	32.16	2.048	0.7101	6.37%	1.002	1.76%
012.00	Starch, Polarimetric (Ewers) (%)	11	10	33.07	1.026	33.05	1.134	0.4484	3.43%	0.2990	1.74%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	7	7	33.14	1.616	33.14	1.833	0.8659	5.53%	0.8270	1.74%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	3	3	30.62	2.179	30.62	2.179	1.258	7.12%	0.5678	1.81%
012.11	Starch, NIR (%)	1	1	31.03							
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	32.18							
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	35	34	10.81	0.4210	10.80	0.4354	0.0933	4.03%	0.2124	2.80%
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	21	20	10.54	0.5120	10.54	0.5758	0.1609	5.46%	0.2050	2.81%
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	19	19	10.44	0.5029	10.42	0.4208	0.1207	4.04%	0.3261	2.81%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	9	9	10.19	0.3685	10.22	0.3576	0.1490	3.50%	0.3104	2.82%
013.08	Fat, Base Pretreat, Roese-Gottlieb Modified (%)	1	1	7.232							
014.99	Fiber, Total Dietary, Miscellaneous (%)	1	1	8.300							
015.43	Aluminum, ICP, Microwave (ppm)	8	8	81.33	12.01	81.33	13.62	6.017	16.74%	3.499	8.25%
015.41	Aluminum, ICP, Dry ash (ppm)	5	4	63.66	7.658	63.66	7.658	3.829	12.03%	1.007	8.56%
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	55.43	12.77						
015.53	Aluminum, ICP-MS, Microwave (ppm)	1	1	85.29							
015.99	Aluminum, Miscellaneous (ppm)	1	1	53.55							

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017.42	Boron, ICP, Open vessel (ppm)	5	5	4.675	1.285	4.675	1.285	0.5746	27.48%	0.5964	12.68%
017.43	Boron, ICP, Microwave (ppm)	7	5	5.394	1.173	5.394	1.173	0.1511	21.75%	0.0488	12.41%
017.41	Boron, ICP, Dry ash (ppm)	5	4	4.686	0.1647	4.686	0.1647	0.0951	3.51%	0.6737	12.68%
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	5.360							
019.43	Calcium, ICP, Microwave (%)	40	40	1.205	0.0556	1.206	0.0532	0.0105	4.41%	0.0415	3.89%
019.41	Calcium, ICP, Dry ash (%)	21	21	1.183	0.0738	1.183	0.0835	0.0228	7.06%	0.0280	3.90%
019.31	Calcium, AAS, Dry ash (%)	20	20	1.175	0.0687	1.182	0.0481	0.0134	4.07%	0.0307	3.90%
019.42	Calcium, ICP, Open vessel (%)	19	19	1.222	0.1104	1.219	0.1198	0.0343	9.83%	0.0399	3.88%
019.44	Calcium, ICP, Dry ash (%)	12	12	1.199	0.0362	1.199	0.0405	0.0146	3.38%	0.0327	3.89%
019.08	Calcium, EDTA (%)	10	10	1.224	0.0311	1.223	0.0345	0.0136	2.82%	0.0382	3.88%
019.99	Calcium, Miscellaneous (%)	5	5	1.178	0.0495	1.178	0.0495	0.0221	4.20%	0.0320	3.90%
019.53	Calcium, ICP-MS, Microwave (%)	4	4	1.134	0.1239	1.134	0.1239	0.0620	10.93%	0.0521	3.92%
019.00	Calcium, Ox-Mn04 Vol. (%)	2	2	1.243	0.1280						
019.09	Calcium, Ion-selective electrode (%)	1	1	1.330							
019.32	Calcium, AAS, Open vessel (%)	1	1	1.045							
021.41	Cobalt, ICP, Dry ash (ppm)	7	7	0.6232	0.2597	0.5582	0.1184	0.0559	21.21%	0.0654	17.46%
021.43	Cobalt, ICP, Microwave (ppm)	7	5	0.5596	0.1912	0.5596	0.1912	0.1069	34.17%	0.0300	17.46%
021.53	Cobalt, ICP-MS, Microwave (ppm)	4	3	0.4967	0.0425	0.4967	0.0425	0.0245	8.56%	0.0120	17.77%
021.42	Cobalt, ICP, Open vessel (ppm)	2	2	0.9975	0.4278						
021.31	Cobalt, AAS, Dry ash (ppm)	1	1	2.500							
022.43	Copper, ICP, Microwave (ppm)	33	33	23.75	1.347	23.73	1.410	0.3068	5.94%	0.7698	9.93%
022.42	Copper, ICP, Open vessel (ppm)	20	19	24.48	1.837	24.41	1.899	0.5447	7.78%	0.6632	9.89%
022.41	Copper, ICP, Dry ash (ppm)	16	16	23.05	2.934	22.74	2.562	0.8006	11.26%	0.7983	10.00%
022.31	Copper, AAS, Dry ash (ppm)	10	9	24.99	2.823	24.79	2.738	1.141	11.04%	0.3073	9.87%
022.53	Copper, ICP-MS, Microwave (ppm)	5	4	22.59	1.197	22.59	1.197	0.5984	5.30%	0.6665	10.01%
022.99	Copper, Miscellaneous (ppm)	4	4	23.23	0.5867	23.23	0.5867	0.2933	2.53%	0.3500	9.96%
022.44	Copper, ICP, Dry ash (ppm)	3	3	22.73	1.058	22.73	1.058	0.6105	4.65%	0.5617	10.00%
022.33	Copper, AAS, Microwave (ppm)	2	2	25.72	2.436						
022.32	Copper, AAS, Open vessel (ppm)	1	1	19.95							
024.52	Iodine, ICP-MS, Open vessel (ppm)	1	1	1.818							
025.43	Iron, ICP, Microwave (ppm)	32	32	266.5	16.98	268.1	14.72	3.254	5.49%	10.66	6.90%
025.41	Iron, ICP, Dry ash (ppm)	18	18	245.9	19.82	245.5	19.72	5.810	8.03%	8.068	6.99%
025.42	Iron, ICP, Open vessel (ppm)	18	17	254.2	19.36	254.8	19.98	6.056	7.84%	10.34	6.95%
025.31	Iron, AAS, Dry ash (ppm)	12	12	241.7	44.78	244.1	45.21	16.32	18.52%	10.82	6.99%
025.53	Iron, ICP-MS, Microwave (ppm)	4	4	217.3	62.15	217.3	62.15	31.08	28.60%	5.830	7.12%
025.99	Iron, Miscellaneous (ppm)	3	3	244.8	4.933	244.8	4.933	2.848	2.01%	7.000	6.99%
025.33	Iron, AAS, Microwave (ppm)	1	1	262.0							
027.43	Magnesium, ICP, Microwave (%)	34	34	0.1309	0.0087	0.1305	0.0076	0.0016	5.82%	0.0029	5.43%
027.41	Magnesium, ICP, Dry ash (%)	19	19	0.1287	0.0079	0.1286	0.0087	0.0025	6.77%	0.0032	5.45%
027.42	Magnesium, ICP, Open vessel (%)	20	19	0.1356	0.0111	0.1350	0.0112	0.0032	8.31%	0.0037	5.41%

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027.44	Magnesium, ICP, Dry ash (%)	11	10	0.1379	0.0041	0.1379	0.0046	0.0018	3.32%	0.0013	5.39%
027.31	Magnesium, AAS, Dry ash (%)	9	9	0.1456	0.0423	0.1338	0.0111	0.0046	8.33%	0.0026	5.41%
027.53	Magnesium, ICP-MS, Microwave (%)	4	4	0.1303	0.0091	0.1303	0.0091	0.0045	6.97%	0.0041	5.44%
027.99	Magnesium, Miscellaneous (%)	4	4	0.1300	0.0041	0.1300	0.0041	0.0020	3.14%	0.0050	5.44%
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.1650							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.1170							
028.43	Manganese, ICP, Microwave (ppm)	30	30	40.16	2.970	40.16	3.053	0.6967	7.60%	1.719	9.18%
028.42	Manganese, ICP, Open vessel (ppm)	20	19	41.95	3.340	42.02	3.619	1.038	8.61%	1.730	9.11%
028.41	Manganese, ICP, Dry ash (ppm)	17	17	39.05	2.047	39.09	2.239	0.6788	5.73%	1.401	9.21%
028.44	Manganese, ICP, Dry ash (ppm)	12	11	40.33	3.261	41.02	1.546	0.5825	3.77%	1.578	9.15%
028.31	Manganese, AAS, Dry ash (ppm)	9	9	37.35	6.404	38.26	4.883	2.035	12.76%	1.306	9.24%
028.53	Manganese, ICP-MS, Microwave (ppm)	5	5	39.13	3.454	39.13	3.454	1.545	8.83%	1.804	9.21%
028.99	Manganese, Miscellaneous (ppm)	4	4	41.40	1.374	41.40	1.374	0.6868	3.32%	1.600	9.13%
028.32	Manganese, AAS, Open vessel (ppm)	1	1	43.80							
028.33	Manganese, AAS, Microwave (ppm)	1	1	38.28							
030.01	Nitrate, Ion-selective electrode (%)	1	1	0.4950							
031.43	Phosphorus, ICP, Microwave (%)	39	38	1.078	0.0490	1.079	0.0452	0.0092	4.19%	0.0286	3.95%
031.01	Phosphorus, Photometric (%)	31	30	1.039	0.0486	1.046	0.0306	0.0070	2.93%	0.0223	3.97%
031.41	Phosphorus, ICP, Dry ash (%)	20	20	1.038	0.0488	1.039	0.0530	0.0148	5.10%	0.0384	3.98%
031.42	Phosphorus, ICP, Open vessel (%)	20	19	1.066	0.0776	1.066	0.0870	0.0249	8.16%	0.0289	3.96%
031.44	Phosphorus, ICP, Dry ash (%)	13	13	1.045	0.0382	1.047	0.0403	0.0140	3.85%	0.0245	3.97%
031.53	Phosphorus, ICP-MS, Microwave (%)	4	4	0.9550	0.2760	0.9550	0.2760	0.1380	28.90%	0.0479	4.03%
031.99	Phosphorus, Miscellaneous (%)	4	4	1.039	0.0347	1.039	0.0347	0.0174	3.34%	0.0175	3.98%
031.03	Phosphorus, Autoanalyzer (%)	2	2	0.9908	0.0930						
032.43	Potassium, ICP, Microwave (%)	37	37	0.7721	0.0399	0.7743	0.0352	0.0072	4.55%	0.0224	4.16%
032.41	Potassium, ICP, Dry ash (%)	19	18	0.7374	0.0341	0.7374	0.0387	0.0114	5.24%	0.0202	4.19%
032.42	Potassium, ICP, Open vessel (%)	19	18	0.7844	0.0736	0.7822	0.0755	0.0223	9.66%	0.0210	4.15%
032.44	Potassium, ICP, Dry ash (%)	12	11	0.7937	0.0294	0.7930	0.0318	0.0120	4.01%	0.0114	4.14%
032.31	Potassium, AAS, Dry ash (%)	9	9	0.7137	0.1346	0.7427	0.0697	0.0290	9.39%	0.0345	4.18%
032.99	Potassium, Miscellaneous (%)	5	5	0.7753	0.0121	0.7753	0.0121	0.0054	1.56%	0.0226	4.16%
032.53	Potassium, ICP-MS, Microwave (%)	4	4	0.7968	0.0525	0.7968	0.0525	0.0262	6.59%	0.0097	4.14%
032.32	Potassium, AAS, Open vessel (%)	1	1	0.7350							
032.52	Potassium, ICP-MS, Open vessel (%)	1	1	0.7100							
033.01	Salt as chloride, Poten Cl (%)	28	28	1.092	0.1194	1.120	0.0384	0.0091	3.43%	0.0097	3.93%
033.00	Salt as chloride, Sol Cl (%)	17	17	1.030	0.1820	1.077	0.0728	0.0221	6.76%	0.0339	3.96%
033.99	Salt, Miscellaneous (%)	9	9	1.041	0.1174	1.053	0.1034	0.0431	9.82%	0.0252	3.97%
033.03	Salt as chloride, Quantab (%)	5	3	1.110	0.0361	1.110	0.0361			0.0000	3.94%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	1.065	0.0636						
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	8	8	0.6686	0.1524	0.6686	0.1728	0.0764	25.85%	0.0333	17.00%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	4	4	0.5609	0.0632	0.5609	0.0632	0.0316	11.27%	0.0573	17.45%

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034.43	Selenium, Total (Se), ICP, Microwave (ppm)	4	3	74.49	128.0	74.49	128.0	90.52	171.85%	6.303	8.36%
034.01	Selenium, Total (Se), Fluor (ppm)	1	1	0.6740							
034.41	Selenium, Total (Se), ICP, Dry ash (ppm)	1	1	0.5405							
034.51	Selenium, Total (Se), ICP-MS, Dry Ash (ppm)	1	1	0.6300							
034.99	Selenium, Total (Se), Miscellaneous (ppm)	1	1	1.375							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	1	1	0.0000							
035.43	Sodium, ICP, Microwave (%)	33	32	0.3905	0.0209	0.3911	0.0185	0.0041	4.74%	0.0127	4.61%
035.41	Sodium, ICP, Dry ash (%)	30	29	0.3856	0.0184	0.3852	0.0190	0.0044	4.93%	0.0080	4.62%
035.42	Sodium, ICP, Open vessel (%)	18	18	0.3792	0.0346	0.3789	0.0338	0.0100	8.92%	0.0126	4.63%
035.31	Sodium, AAS, Dry ash (%)	14	13	0.4132	0.0980	0.3907	0.0310	0.0107	7.93%	0.0139	4.61%
035.53	Sodium, ICP-MS, Microwave (%)	4	4	0.3789	0.0288	0.3789	0.0288	0.0144	7.59%	0.0094	4.63%
035.99	Sodium, Miscellaneous (%)	4	4	0.3788	0.0263	0.3788	0.0263	0.0131	6.93%	0.0275	4.63%
035.01	Sodium, Ion-selective electrode (%)	1	1	0.4110							
035.05	Sodium, Flame Emission (%)	1	1	0.3700							
035.32	Sodium, AAS, Open vessel (%)	1	1	0.3350							
036.43	Sulfur, ICP, Microwave (%)	21	21	0.4745	0.0320	0.4710	0.0280	0.0076	5.94%	0.0147	4.48%
036.42	Sulfur, ICP, Open vessel (%)	20	19	0.4412	0.0287	0.4414	0.0321	0.0092	7.28%	0.0078	4.52%
036.04	Sulfur, LECO (%)	5	5	0.4825	0.0449	0.4825	0.0449	0.0201	9.30%	0.0118	4.46%
036.99	Sulfur, Miscellaneous (%)	2	2	0.4325	0.0248						
036.00	Sulfur, Gravimetric (%)	1	1	0.5195							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.4310							
037.43	Zinc, ICP, Microwave (ppm)	34	34	217.6	16.12	218.2	14.02	3.005	6.43%	7.582	7.11%
037.42	Zinc, ICP, Open vessel (ppm)	19	19	217.9	19.59	218.6	20.62	5.913	9.43%	5.561	7.11%
037.41	Zinc, ICP, Dry ash (ppm)	16	15	211.5	14.69	212.0	14.94	4.820	7.04%	5.901	7.14%
037.31	Zinc, AAS, Dry ash (ppm)	10	10	200.7	58.61	213.1	34.26	13.54	16.08%	7.154	7.14%
037.53	Zinc, ICP-MS, Microwave (ppm)	4	4	203.2	21.82	203.2	21.82	10.91	10.74%	7.054	7.19%
037.99	Zinc, Miscellaneous (ppm)	4	4	215.7	22.96	215.7	22.96	11.48	10.64%	9.300	7.13%
037.44	Zinc, ICP, Dry ash (ppm)	3	3	197.8	29.35	197.8	29.35	16.94	14.84%	5.343	7.22%
037.33	Zinc, AAS, Microwave (ppm)	2	2	214.8	0.1450						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	229.0							
037.34	Zinc, AAS, Dry ash (ppm)	1	1	208.7							
038.43	Molybdenum, ICP, Microwave (ppm)	8	8	0.6286	0.2307	0.6160	0.2322	0.1026	37.69%	0.0428	17.21%
038.41	Molybdenum, ICP, Dry ash (ppm)	5	5	0.6416	0.0835	0.6416	0.0835	0.0373	13.01%	0.0254	17.10%
038.42	Molybdenum, ICP, Open vessel (ppm)	4	3	0.8433	0.1489	0.8433	0.1489	0.0859	17.65%	0.0800	16.41%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	3	3	0.6129	0.0448	0.6129	0.0448	0.0258	7.30%	0.0396	17.22%
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	6.011							
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	0.5634							
042.00	Chloride, Titrimetric (%)	7	7	0.7225	0.0784	0.7225	0.0889	0.0420	12.31%	0.0096	4.20%
042.99	Chloride, Miscellaneous (%)	3	3	0.8816	0.2812	0.8816	0.2812	0.1624	31.90%	0.0158	4.08%
101.01	Choline Chloride, Chem (ppm)	1	1	3,267							

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101.99	Choline Chloride, Miscellaneous (ppm)	1	1	3,470							
102.01	Niacin, Microbiological (ppm)	1	1	162.5							
102.02	Niacin, LC (ppm)	1	1	136.0							
102.99	Niacin, Miscellaneous (ppm)	1	1	1.910							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	21.90							
103.99	Pantothenic Acid, Miscellaneous (ppm)	1	1	0.2100							
104.03	Riboflavin, LC (ppm)	4	3	12.58	0.5021	12.58	0.5021	0.2899	3.99%	0.2133	10.93%
104.99	Riboflavin, Miscellaneous (ppm)	1	1	0.0785							
105.00	Thiamine, LC (ppm)	4	2	13.45	0.2051	13.45	0.2051			0.3300	10.82%
105.99	Thiamine, Miscellaneous (ppm)	1	1	0.1960							
106.02	Vitamin A, LC (KU / kg)	13	13	9.135	2.097	9.135	2.378	0.8244	26.03%	1.257	
106.00	Vitamin A, Color (KU / kg)	1	1	7.215							
106.01	Vitamin A, UV (KU / kg)	1	1	15.45							
107.00	Vitamin B12, Microbiological (ppb)	1	1	84.75							
107.99	Vitamin B12, Miscellaneous (ppb)	1	1	5.200							
108.02	Vitamin D3, LC (KU / kg)	6	5	1.545	0.8489	1.545	0.8489	0.4745	54.93%	0.3376	
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	0.3500							
108.99	Vitamin D3, Miscellaneous (KU / kg)	1	1	0.8850							
109.02	Vitamin E, LC (IU / kg)	16	15	98.25	22.09	99.60	17.03	5.497	17.10%	2.891	
109.99	Vitamin E, Miscellaneous (IU / kg)	1	1	123.0							
111.98	Vitamin C, Ascorbic Acid, Miscellaneous (ppm)	1	1	8.350							
111.00	Vitamin C, Phosphorylated, LC (ppm)	1		4.400							
112.01	Pyridoxine, LC (µg / g)	3	3	14.07	2.545	14.07	2.545	1.469	18.09%	0.6967	10.75%
112.99	Pyridoxine, Miscellaneous (µg / g)	1	1	11.37							
113.01	Folic Acid, Micro (ppm)	1	1	2.650							
113.02	Folic acid, LC (ppm)	1	1	2.700							
113.99	Folic acid, Miscellaneous (ppm)	1	1	0.0015							
114.01	Biotin, Microbiological (ppm)	1	1	0.5240							
114.99	Biotin, Miscellaneous (ppm)	1	1	0.0010							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	2	2	0.2500	0.2616						
115.99	Non Protein N (NPN), Miscellaneous (%)	1	1	0.6794							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	7.750							
120.00	Alanine, Post-col Ninhydrin Der (%)	16	16	2.153	0.0757	2.150	0.0761	0.0238	3.54%	0.0295	3.56%
120.05	Alanine, Pre-col AQC Der (%)	9	9	2.121	0.0814	2.117	0.0849	0.0354	4.01%	0.0476	3.57%
120.99	Alanine, Miscellaneous (%)	3	3	2.083	0.2452	2.083	0.2452	0.1415	11.77%	0.0267	3.58%
120.02	Alanine, Post-col OPA Der (%)	2	2	2.106	0.0431						
121.00	Arginine, Post-col Ninhydrin Der (%)	16	15	1.685	0.0676	1.686	0.0748	0.0242	4.44%	0.0351	3.70%
121.05	Arginine, Pre-col AQC Der (%)	9	9	1.651	0.2384	1.659	0.2537	0.1057	15.30%	0.0296	3.71%
121.99	Arginine, Miscellaneous (%)	3	3	1.548	0.0584	1.548	0.0584	0.0337	3.77%	0.0567	3.75%
121.02	Arginine, Post-col OPA Der (%)	2	2	1.653	0.0873						

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122.00	Aspartic, Post-col Ninhydrin Der (%)	16	15	2.344	0.0653	2.344	0.0740	0.0239	3.16%	0.0260	3.52%
122.05	Aspartic, Pre-col AQC Der (%)	9	8	2.287	0.1419	2.287	0.1610	0.0711	7.04%	0.0152	3.53%
122.99	Aspartic, Miscellaneous (%)	3	3	2.427	0.0702	2.427	0.0702	0.0406	2.89%	0.0200	3.50%
122.02	Aspartic, Post-col OPA Der (%)	2	2	2.483	0.1803						
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	17	16	0.4246	0.0317	0.4209	0.0264	0.0082	6.26%	0.0115	4.56%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	8	8	0.4280	0.0721	0.4234	0.0710	0.0314	16.76%	0.0081	4.55%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	2	2	0.4960	0.0764						
124.99	Cysteine/Cystine, Miscellaneous (%)	2	2	0.3819	0.0098						
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	16	5.091	0.2254	5.091	0.2556	0.0799	5.02%	0.0825	3.13%
125.05	Glutamic, Pre-col AQC Der (%)	9	9	5.007	0.3596	5.007	0.4078	0.1699	8.14%	0.0900	3.14%
125.99	Glutamic, Miscellaneous (%)	3	3	5.185	0.1516	5.185	0.1516	0.0875	2.92%	0.0233	3.12%
125.02	Glutamic, Post-col OPA Der (%)	2	2	4.366	0.9624						
126.00	Glycine, Post-col Ninhydrin Der (%)	16	16	1.958	0.0586	1.958	0.0659	0.0206	3.37%	0.0319	3.62%
126.05	Glycine, Pre-col AQC Der (%)	9	9	1.992	0.1446	1.980	0.1339	0.0558	6.77%	0.0334	3.61%
126.02	Glycine, Post-col OPA Der (%)	2	2	1.947	0.0739						
126.99	Glycine, Miscellaneous (%)	2	2	1.333	1.022						
127.00	Histidine, Post-col Ninhydrin Der (%)	16	16	0.6880	0.0448	0.6831	0.0368	0.0115	5.39%	0.0144	4.24%
127.05	Histidine, Pre-col AQC Der (%)	9	8	0.6632	0.0923	0.6632	0.1047	0.0463	15.79%	0.0059	4.25%
127.02	Histidine, Post-col OPA Der (%)	2	2	0.6203	0.0209						
127.99	Histidine, Miscellaneous (%)	2	2	0.6525	0.0601						
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	16	1.163	0.0564	1.160	0.0561	0.0175	4.84%	0.0194	3.91%
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	1.146	0.0923	1.150	0.0951	0.0396	8.27%	0.0131	3.92%
128.99	Isoleucine, Miscellaneous (%)	3	3	1.075	0.1739	1.075	0.1739	0.1229	16.17%	0.0167	3.96%
128.02	Isoleucine, Post-col OPA Der (%)	2	2	1.128	0.0523						
129.00	Leucine, Post-col Ninhydrin Der (%)	16	15	3.129	0.0940	3.121	0.0857	0.0277	2.75%	0.0256	3.37%
129.05	Leucine, Pre-col AQC Der (%)	9	9	3.018	0.1420	3.018	0.1610	0.0671	5.34%	0.0382	3.39%
129.99	Leucine, Miscellaneous (%)	3	3	2.978	0.3638	2.978	0.3638	0.2100	12.22%	0.0733	3.39%
129.02	Leucine, Post-col OPA Der (%)	2	2	3.031	0.0838						
130.00	L-Lysine, Post-col Ninhydrin Der (%)	18	18	1.432	0.0872	1.433	0.0566	0.0167	3.95%	0.0253	3.79%
130.05	L-Lysine, Pre-col AQC Der (%)	9	8	1.460	0.1340	1.444	0.1120	0.0495	7.76%	0.0278	3.78%
130.99	L-Lysine, Miscellaneous (%)	4	4	1.444	0.1088	1.444	0.1088	0.0544	7.54%	0.0312	3.78%
130.02	L-Lysine, Post-col OPA Der (%)	2	2	1.401	0.1142						
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	18	0.7160	0.1146	0.7371	0.0478	0.0141	6.49%	0.0170	4.19%
131.05	Methionine, PAO Pre-col AQC Der (%)	9	9	0.7617	0.0830	0.7598	0.0816	0.0340	10.74%	0.0109	4.17%
131.99	Methionine, Miscellaneous (%)	3	3	0.6982	0.1245	0.6982	0.1245	0.0881	17.84%	0.0159	4.22%
131.02	Methionine, PAO Post-col OPA Der (%)	2	2	0.7365	0.0474						
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	16	1.460	0.0638	1.458	0.0499	0.0156	3.42%	0.0253	3.78%
132.05	Phenylalanine, Pre-col AQC Der (%)	9	9	1.444	0.0748	1.440	0.0761	0.0317	5.29%	0.0291	3.79%
132.99	Phenylalanine, Miscellaneous (%)	3	3	1.393	0.1418	1.393	0.1418	0.0819	10.18%	0.0267	3.80%
132.02	Phenylalanine, Post-col OPA Der (%)	2	2	1.401	0.0265						

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133.00	Proline, Post-col Ninhydrin Der (%)	16	15	2.227	0.1292	2.229	0.1414	0.0456	6.34%	0.0388	3.55%
133.05	Proline, Pre-col AQC Der (%)	9	9	2.207	0.0813	2.207	0.0922	0.0384	4.18%	0.0392	3.55%
133.99	Proline, Miscellaneous (%)	4	4	2.246	0.2769	2.246	0.2769	0.1384	12.33%	0.0363	3.54%
134.00	Serine, Post-col Ninhydrin Der (%)	16	16	1.366	0.1061	1.377	0.0957	0.0299	6.95%	0.0245	3.81%
134.05	Serine, Pre-col AQC Der (%)	9	9	1.349	0.1825	1.358	0.1843	0.0768	13.57%	0.0240	3.82%
134.99	Serine, Miscellaneous (%)	3	3	1.483	0.0922	1.483	0.0922	0.0532	6.22%	0.0083	3.77%
134.02	Serine, Post-col OPA Der (%)	2	2	1.462	0.3794						
135.00	Threonine, Post-col Ninhydrin Der (%)	16	16	1.103	0.0436	1.102	0.0455	0.0142	4.13%	0.0218	3.94%
135.05	Threonine, Pre-col AQC Der (%)	9	9	1.101	0.1117	1.118	0.0784	0.0327	7.01%	0.0149	3.93%
135.99	Threonine, Miscellaneous (%)	4	4	1.123	0.0593	1.123	0.0593	0.0296	5.28%	0.0173	3.93%
135.02	Threonine, Post-col OPA Der (%)	2	2	1.079	0.0156						
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	8	8	0.2747	0.0157	0.2752	0.0165	0.0073	5.99%	0.0026	4.86%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	5	4	0.2889	0.0365	0.2889	0.0365	0.0210	12.62%	0.0003	4.82%
136.05	Tryptophan, Pre-col AQC Der (%)	3	3	0.2480	0.0545	0.2480	0.0545	0.0314	21.96%	0.0082	4.93%
136.99	Tryptophan, Miscellaneous (%)	3	3	0.4946	0.2850	0.4946	0.2850	0.1645	57.62%	0.0098	4.45%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.2735	0.0021						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	2	2	0.2495	0.0205						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	12	1.041	0.1167	1.059	0.0787	0.0284	7.44%	0.0356	3.97%
137.05	Tyrosine, Pre-col AQC Der (%)	9	9	1.098	0.1249	1.101	0.1348	0.0562	12.24%	0.0175	3.94%
137.99	Tyrosine, Miscellaneous (%)	3	3	0.8658	0.0543	0.8658	0.0543	0.0314	6.27%	0.0150	4.09%
137.02	Tyrosine, Post-col OPA Der (%)	2	2	0.9668	0.0944						
138.00	Valine, Post-col Ninhydrin Der (%)	16	16	1.375	0.0557	1.376	0.0568	0.0178	4.13%	0.0225	3.81%
138.05	Valine, Pre-col AQC Der (%)	9	9	1.362	0.0646	1.362	0.0732	0.0305	5.38%	0.0152	3.82%
138.99	Valine, Miscellaneous (%)	3	3	1.301	0.2116	1.301	0.2116	0.1222	16.27%	0.0217	3.84%
138.02	Valine, Post-col OPA Der (%)	2	2	1.389	0.0407						
139.00	Taurine, Post-col Ninhydrin Der (%)	3	3	525.5	909.8	525.5	909.8	643.3	173.12%	5.338	0.44%
139.05	Taurine, Pre-col AQC Der (%)	3	3	0.1780	0.0061	0.1780	0.0061	0.0035	3.42%	0.0053	5.19%
139.99	Taurine, Miscellaneous (%)	3	3	0.1907	0.0450	0.1907	0.0450	0.0318	23.58%	0.0020	5.13%
139.02	Taurine, Post-col OPA Der (%)	1	1	0.1700							
160.10	Fructose, HPAEC PAD (%)	1	1	0.1000							
160.99	Fructose, Miscellaneous (%)	1		0.1500							
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.10	Glucose, HPAEC PAD (%)	1	1	0.0500							
162.99	Glucose, Miscellaneous (%)	1	1	0.2050							
163.10	Lactose, HPAEC PAD (%)	1		0.0000							
163.99	Lactose, Miscellaneous (%)	1		0.1500							
164.10	Maltose, HPAEC PAD (%)	1		0.0000							
164.99	Maltose, Miscellaneous (%)	1		0.1500							
165.10	Sucrose, HPAEC PAD (%)	1	1	1.210							
165.99	Sucrose, Miscellaneous (%)	1	1	1.235							

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166.10	Raffinose, HPAEC PAD (%)	1	1	0.1900							
166.99	Raffinose, Miscellaneous (%)	1	1	0.2000							
167.10	Stachyose, HPAEC PAD (%)	1	1	0.3850							
167.99	Stachyose, Miscellaneous (%)	1	1	0.3800							
392.99	Fenbendazole, Miscellaneous (ppm)	1		1.000							
400.01	Water Activity, Aqualab chilled mirror (Units)	15	15	0.4481	0.0480	0.4500	0.0201	0.0065	4.46%	0.0063	
400.99	Water Activity, Miscellaneous (Units)	4	4	0.4575	0.0214	0.4575	0.0214	0.0107	4.68%	0.0165	
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	3	3	0.0859	0.0073	0.0859	0.0073	0.0042	8.45%	0.0092	22.00%
516.52	Arsenic, Total (As), ICP-MS, Open vessel (ppm)	1	1	0.0950							
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	2		0.8900							
518.53	Cadmium, ICP-MS, Microwave (ppm)	3	3	0.0437	0.0032	0.0437	0.0032	0.0019	7.35%	0.0022	22.00%
518.41	Cadmium, ICP, Dry ash (ppm)	1	1	0.0520							
518.43	Cadmium, ICP, Microwave (ppm)	3	1								
518.52	Cadmium, ICP-MS, Open vessel (ppm)	1	1	0.0550							
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	4	4	1.650	0.4857	1.650	0.4857	0.2429	29.44%	0.1140	14.84%
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	3	3	2.187	0.3747	2.187	0.3747	0.2649	17.13%	0.0333	14.22%
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	1	1	1.752							
520.42	Chromium, Total (Cr), ICP, Open vessel (ppm)	1	1	2.640							
520.51	Chromium, Total (Cr), ICP-MS, Dry ash (ppm)	1	1	1.540							
526.53	Lead, ICP-MS, Microwave (ppm)	4	4	0.2178	0.0484	0.2178	0.0484	0.0242	22.21%	0.0190	20.12%
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.1236							
526.43	Lead, ICP, Microwave (ppm)	2	1	0.1471							
526.52	Lead, ICP-MS, Open vessel (ppm)	1	1	0.2200							
529.99	Mercury, Miscellaneous (ppb)	5	1								
539.53	Nickel, ICP-MS, Microwave (ppm)	3	3	1.278	0.1154	1.278	0.1154	0.0666	9.03%	0.1692	15.42%
539.43	Nickel, ICP, Microwave (ppm)	2	2	1.144	0.1776						
539.41	Nickel, ICP, Dry ash (ppm)	1	1	1.207							
539.51	Nickel, ICP-MS, Dry ash (ppm)	1	1	1.245							
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1		0.0200							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	1		0.0200							
706.99	Caprylic acid (8:0), Miscellaneous (%) (w/w)	2		0.0200							
708.99	Capric acid (10:0), Miscellaneous (%) (w/w)	2		0.0200							
710.99	Lauric Acid (12:0), Miscellaneous (%) (w/w)	4	2	0.0284	0.0305	0.0284	0.0305			0.0001	6.83%
714.99	Myristic Acid (14:0) , Miscellaneous (%) (w/w)	4	3	0.0446	0.0170	0.0446	0.0170	0.0098	38.11%	0.0068	6.39%
714.01	Myristic Acid (14:0) , Direct Methylation by Alkali Hydrolysis & GC (%) (w/w)	1	1	0.0550							
716.99	Palmitic Acid (16:0), Miscellaneous (%) (w/w)	4	3	1.913	0.2634	1.913	0.2634	0.1521	13.77%	0.0378	3.63%
716.01	Palmitic Acid (16:0), Direct Methylation by Alkali Hydrolysis & GC (%) (w/w)	1	1	2.010							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (%) (w/w)	5	4	0.4036	0.0401	0.4036	0.0401	0.0200	9.93%	0.0066	4.58%
718.01	Palmitoleic Acid (9c-16:1), Direct Methylation by Alkali Hydrolysis & GC (%) (w/w)	1	1	0.4450							
720.99	Margaric acid (17:0), Miscellaneous (%) (w/w)	2	1	0.0100							

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
720.01	Margaric acid (17:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0500							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	4	3	0.5862	0.1289	0.5862	0.1289	0.0744	21.99%	0.0185	4.33%
722.01	Stearic Acid (18:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.5850							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	4	3	2.988	0.1571	2.988	0.1571	0.0907	5.26%	0.0323	3.39%
724.01	Oleic Acid (9c-18:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	3.140							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	6	5	2.625	0.2744	2.625	0.2744	0.1546	10.45%	0.0314	3.46%
726.01	Linoleic Acid (9c,12c-18:2), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	2.555							
726.02	Linoleic Acid (9c,12c-18:2), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	2.435							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	6	5	0.1029	0.0176	0.1029	0.0176	0.0053	17.12%	0.0026	5.63%
728.01	alpha-Linolenic Acid (9c,12c,15c-18:3), Direct Methylation by Alkali Hydrolysis	1	1	0.1100							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	4	3	0.0177	0.0069	0.0177	0.0069			0.0000	7.34%
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	3	3	0.0275	0.0066	0.0275	0.0066	0.0047	23.95%	0.0001	6.87%
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (% (w/w))	4	3	0.0410	0.0183	0.0410	0.0183			0.0000	6.47%
738.99	Mead Acid (11c,14c,17c-20:3), Miscellaneous (% (w/w))	1	1	0.0100							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	5	3	0.0097	0.0003	0.0097	0.0003	0.0002	3.00%	0.0004	8.04%
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	4	3	0.0397	0.0480	0.0397	0.0480	0.0339	120.84%	0.0035	6.50%
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	4									
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w))	5	2	0.0059	0.0002	0.0059	0.0002			0.0001	8.66%
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	4	3	0.0151	0.0050	0.0151	0.0050	0.0035	33.22%	0.0002	7.52%
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	5	3	0.0102	0.0003	0.0102	0.0003	0.0002	3.14%	0.0001	7.98%
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	3	2	0.0077	0.0033	0.0077	0.0033			0.0003	8.32%
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	3	3	2.429	4.019	2.429	4.019	2.842	165.48%	4.624	3.50%
754.01	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.1100							
754.02	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.1450							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	3	3	2.579	0.3211	2.579	0.3211	0.1854	12.45%	0.0160	3.47%
756.01	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	2	2	2.533	0.0318						
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	4	3	2.322	0.3927	2.322	0.3927	0.2267	16.92%	0.0367	3.52%
758.01	Total Saturated Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	2.700							
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	3	3	15.83	22.10	15.83	22.10	15.63	139.58%	0.0733	2.51%
762.01	Total Monounsaturated Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	3.765							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	3.615							
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	3	3	10.18	14.03	10.18	14.03	9.918	137.82%	0.1733	2.82%
766.01	Total Polyunsaturated Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	2.665							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	2.830							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	9.700							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	3	3	8.797	0.9942	8.797	0.9942	0.5740	11.30%	0.1004	2.88%
772.01	Total Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	9.135							

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.

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
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Animal Feed Scheme

Dry Cat Feed

Test Material Code # 202232

Method Precision Report

Methods Reported: 130

Labs Reporting: 183

Issue Date : 01/31/2023

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.00	Loss on Drying, Vac 95°C 5 hr (%)	6	5	6.948	0.1351		0.0732			1.05%		
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	59	53	6.838	0.2405	0.2331	0.0668	0.2425	3.41%	0.98%	3.55%	3.628
001.99	Loss on Drying, Miscellaneous (%)	18	15	6.789	0.7850	0.3584	0.0669	0.3646	5.14%	0.96%	5.23%	5.448
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	14	31.31	0.3955	0.3985	0.1385	0.4219	1.27%	0.44%	1.35%	3.046
002.05	Protein, Crude, Copper, Boric Acid (%)	23	22	31.12	0.3497	0.3481	0.1080	0.3644	1.12%	0.35%	1.17%	3.374
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	138	129	31.66	0.4297	0.2762	0.2527	0.3744	0.87%	0.80%	1.18%	1.481
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	7	6	7.560	1.671	0.3650	0.1169	0.3833	5.26%	1.68%	5.52%	3.278
003.06	Fat, Crude, Pet Ether (%)	16	15	7.031	1.067	0.3893	0.1876	0.4321	5.74%	2.77%	6.37%	2.303
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	9	7	6.619	0.4411	0.2433	0.1275	0.2747	3.75%	1.96%	4.23%	2.155
003.10	Fat, Crude, Randall, Pet Ether (%)	28	26	6.774	0.4418	0.4155	0.1077	0.4293	6.11%	1.58%	6.31%	3.986
003.13	Fat, Crude, Randall, Hexane Ext. (%)	6	6	7.123	1.241	1.239	0.1082	1.243	17.39%	1.52%	17.46%	11.49
003.14	Fat, Crude, Ankom (%)	45	40	7.097	1.174	0.7469	0.1061	0.7544	10.92%	1.55%	11.03%	7.113
004.00	Fiber, Crude, Asbestos Free (%)	14	12	2.298	1.085	0.1991	0.1442	0.2459	10.45%	7.57%	12.90%	1.705
004.03	Fiber, Crude, Fritted Glass (%)	6	6	2.680	1.290	1.288	0.1037	1.292	48.05%	3.87%	48.21%	12.46
004.06	Fiber, Crude, Fibertec (%)	21	20	1.996	0.3444	0.2507	0.1195	0.2777	12.25%	5.84%	13.57%	2.323
004.07	Fiber, Crude, ANKOM (%)	71	65	1.974	0.5084	0.3722	0.1526	0.4023	18.77%	7.69%	20.29%	2.637
005.00	Ash, 2h @ 600°C (%)	97	90	6.540	0.3093	0.1187	0.0778	0.1419	1.82%	1.19%	2.18%	1.824
005.05	Ash, 3h @ 550°C (%)	35	34	6.540	0.0792	0.0633	0.0548	0.0837	0.97%	0.84%	1.28%	1.528
005.99	Ash, Miscellaneous (%)	13	12	6.426	0.1651	0.0985	0.0635	0.1172	1.52%	0.98%	1.81%	1.844
008.02	Fiber, Acid Detergent, Crucible (%)	13	12	3.694	0.7946	0.8148	0.1014	0.8211	21.84%	2.72%	22.00%	8.095
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	42	38	3.884	0.9596	0.7594	0.2016	0.7857	19.12%	5.07%	19.78%	3.898
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	13	11	11.90	3.375	2.080	0.2776	2.099	18.71%	2.50%	18.88%	7.559
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	38	35	11.81	2.996	2.309	0.4688	2.356	19.03%	3.86%	19.42%	5.024
010.99	Moisture, Miscellaneous (%)	17	15	6.807	0.5572	0.3300	0.1164	0.3499	4.77%	1.68%	5.06%	3.007
011.01	Loss on Drying, HT, 135°C 2hr (%)	67	61	7.543	0.3171	0.2435	0.0835	0.2574	3.24%	1.11%	3.42%	3.083
012.00	Starch, Polarimetric (Ewers) (%)	11	10	33.07	1.026	1.008	0.2636	1.042	3.05%	0.80%	3.15%	3.954
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	13	13	31.93	2.460	2.387	0.8380	2.530	7.48%	2.62%	7.92%	3.019
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	7	7	33.14	1.616	1.531	0.7334	1.697	4.62%	2.21%	5.12%	2.314
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	21	19	10.54	0.5120	0.4819	0.1426	0.5025	4.55%	1.35%	4.75%	3.525
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	35	33	10.81	0.4210	0.4111	0.1660	0.4433	3.80%	1.54%	4.10%	2.670
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	9	9	10.19	0.3685	0.3067	0.2889	0.4213	3.01%	2.83%	4.13%	1.458
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	19	19	10.44	0.5029	0.4576	0.2949	0.5444	4.39%	2.83%	5.22%	1.846
015.43	Aluminum, ICP, Microwave (ppm)	8	8	81.33	12.01	11.79	3.194	12.22	14.50%	3.93%	15.02%	3.825
017.42	Boron, ICP, Open vessel (ppm)	5	5	4.675	1.285	1.236	0.4968	1.332	26.43%	10.63%	28.49%	2.681
019.08	Calcium, EDTA (%)	10	10	1.224	0.0311	0.0148	0.0387	0.0414	1.21%	3.16%	3.39%	1.070
019.31	Calcium, AAS, Dry ash (%)	20	18	1.175	0.0687	0.0570	0.0222	0.0612	4.82%	1.87%	5.17%	2.761

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
019.41	Calcium, ICP, Dry ash (%)	21	21	1.183	0.0738	0.0716	0.0252	0.0759	6.05%	2.13%	6.42%	3.011
019.42	Calcium, ICP, Open vessel (%)	19	19	1.222	0.1104	0.1070	0.0385	0.1137	8.76%	3.15%	9.31%	2.957
019.43	Calcium, ICP, Microwave (%)	40	38	1.205	0.0556	0.0363	0.0395	0.0537	3.01%	3.28%	4.45%	1.358
019.44	Calcium, ICP, Dry ash (%)	12	12	1.199	0.0362	0.0289	0.0308	0.0423	2.41%	2.57%	3.53%	1.370
019.99	Calcium, Miscellaneous (%)	5	5	1.178	0.0495	0.0436	0.0329	0.0546	3.71%	2.79%	4.64%	1.662
021.41	Cobalt, ICP, Dry ash (ppm)	7	6	0.6232	0.2597	0.0670	0.0497	0.0834	12.67%	9.41%	15.78%	1.677
021.43	Cobalt, ICP, Microwave (ppm)	7	5	0.5596	0.1912	0.1903	0.0266	0.1922	34.01%	4.76%	34.34%	7.211
022.31	Copper, AAS, Dry ash (ppm)	10	9	24.99	2.823	2.816	0.2892	2.831	11.27%	1.16%	11.33%	9.788
022.41	Copper, ICP, Dry ash (ppm)	16	15	23.05	2.934	2.132	0.7978	2.276	9.46%	3.54%	10.10%	2.853
022.42	Copper, ICP, Open vessel (ppm)	20	17	24.48	1.837	1.925	0.4142	1.969	7.86%	1.69%	8.04%	4.754
022.43	Copper, ICP, Microwave (ppm)	33	31	23.75	1.347	1.161	0.6566	1.333	4.90%	2.77%	5.63%	2.031
025.31	Iron, AAS, Dry ash (ppm)	12	12	241.7	44.78	44.04	11.50	45.52	18.22%	4.76%	18.83%	3.958
025.41	Iron, ICP, Dry ash (ppm)	18	17	245.9	19.82	19.83	6.390	20.84	8.05%	2.59%	8.46%	3.261
025.42	Iron, ICP, Open vessel (ppm)	18	16	254.2	19.36	15.94	6.311	17.15	6.21%	2.46%	6.68%	2.717
025.43	Iron, ICP, Microwave (ppm)	32	31	266.5	16.98	13.24	9.854	16.50	4.94%	3.68%	6.16%	1.675
027.31	Magnesium, AAS, Dry ash (%)	9	7	0.1456	0.0423	0.0087	0.0016	0.0088	6.59%	1.18%	6.69%	5.648
027.41	Magnesium, ICP, Dry ash (%)	19	19	0.1287	0.0079	0.0074	0.0036	0.0083	5.78%	2.81%	6.42%	2.290
027.42	Magnesium, ICP, Open vessel (%)	20	18	0.1356	0.0111	0.0093	0.0034	0.0100	6.96%	2.55%	7.41%	2.913
027.43	Magnesium, ICP, Microwave (%)	34	33	0.1309	0.0087	0.0073	0.0033	0.0080	5.61%	2.57%	6.18%	2.400
027.44	Magnesium, ICP, Dry ash (%)	11	10	0.1379	0.0041	0.0040	0.0013	0.0042	2.89%	0.92%	3.03%	3.294
028.31	Manganese, AAS, Dry ash (ppm)	9	7	37.35	6.404	3.100	0.9633	3.246	8.06%	2.50%	8.44%	3.370
028.41	Manganese, ICP, Dry ash (ppm)	17	16	39.05	2.047	1.915	1.176	2.248	4.89%	3.01%	5.74%	1.911
028.42	Manganese, ICP, Open vessel (ppm)	20	17	41.95	3.340	3.311	1.007	3.460	7.83%	2.38%	8.19%	3.437
028.43	Manganese, ICP, Microwave (ppm)	30	29	40.16	2.970	2.705	1.685	3.187	6.76%	4.21%	7.96%	1.892
028.44	Manganese, ICP, Dry ash (ppm)	12	10	40.33	3.261	0.6524	1.401	1.545	1.58%	3.40%	3.75%	1.103
028.53	Manganese, ICP-MS, Microwave (ppm)	5	5	39.13	3.454	3.224	1.753	3.670	8.24%	4.48%	9.38%	2.093
031.01	Phosphorus, Photometric (%)	31	28	1.039	0.0486	0.0275	0.0191	0.0334	2.63%	1.82%	3.20%	1.754
031.41	Phosphorus, ICP, Dry ash (%)	20	20	1.038	0.0488	0.0422	0.0345	0.0545	4.07%	3.32%	5.25%	1.582
031.42	Phosphorus, ICP, Open vessel (%)	20	19	1.066	0.0776	0.0754	0.0260	0.0797	7.07%	2.44%	7.48%	3.063
031.43	Phosphorus, ICP, Microwave (%)	39	35	1.078	0.0490	0.0350	0.0248	0.0429	3.25%	2.29%	3.97%	1.732
031.44	Phosphorus, ICP, Dry ash (%)	13	12	1.045	0.0382	0.0378	0.0169	0.0414	3.61%	1.61%	3.95%	2.450
032.31	Potassium, AAS, Dry ash (%)	9	8	0.7137	0.1346	0.0459	0.0302	0.0549	6.07%	4.00%	7.27%	1.817
032.41	Potassium, ICP, Dry ash (%)	19	18	0.7374	0.0341	0.0318	0.0175	0.0363	4.31%	2.37%	4.92%	2.075
032.42	Potassium, ICP, Open vessel (%)	19	18	0.7844	0.0736	0.0720	0.0212	0.0751	9.18%	2.70%	9.57%	3.540
032.43	Potassium, ICP, Microwave (%)	37	35	0.7721	0.0399	0.0307	0.0208	0.0371	3.97%	2.68%	4.79%	1.785
032.44	Potassium, ICP, Dry ash (%)	12	11	0.7937	0.0294	0.0286	0.0095	0.0302	3.61%	1.19%	3.80%	3.183
032.99	Potassium, Miscellaneous (%)	5	5	0.7753	0.0121		0.0174			2.24%		
033.00	Salt as chloride, Sol Cl (%)	17	16	1.030	0.1820	0.1011	0.0294	0.1053	9.48%	2.76%	9.87%	3.578
033.01	Salt as chloride, Poten Cl (%)	28	25	1.092	0.1194	0.0368	0.0091	0.0379	3.28%	0.81%	3.37%	4.152
033.99	Salt, Miscellaneous (%)	9	8	1.041	0.1174	0.0738	0.0195	0.0763	6.88%	1.82%	7.12%	3.920
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	8	7	0.6686	0.1524	0.1359	0.0208	0.1375	21.29%	3.25%	21.54%	6.623
035.31	Sodium, AAS, Dry ash (%)	14	11	0.4132	0.0980	0.0242	0.0097	0.0261	6.25%	2.50%	6.73%	2.693
035.41	Sodium, ICP, Dry ash (%)	30	28	0.3856	0.0184	0.0170	0.0072	0.0185	4.43%	1.88%	4.81%	2.556
035.42	Sodium, ICP, Open vessel (%)	18	18	0.3792	0.0346	0.0335	0.0121	0.0356	8.83%	3.20%	9.39%	2.934
035.43	Sodium, ICP, Microwave (%)	33	31	0.3905	0.0209	0.0197	0.0113	0.0227	5.04%	2.90%	5.82%	2.007
036.04	Sulfur, LECO (%)	5	5	0.4825	0.0449	0.0442	0.0107	0.0455	9.17%	2.22%	9.43%	4.257

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
036.42	Sulfur, ICP, Open vessel (%)	20	19	0.4412	0.0287	0.0282	0.0071	0.0291	6.39%	1.60%	6.59%	4.115
036.43	Sulfur, ICP, Microwave (%)	21	20	0.4745	0.0320	0.0249	0.0139	0.0285	5.30%	2.95%	6.06%	2.057
037.31	Zinc, AAS, Dry ash (ppm)	10	9	200.7	58.61	30.49	7.431	31.38	14.07%	3.43%	14.48%	4.223
037.41	Zinc, ICP, Dry ash (ppm)	16	14	211.5	14.69	14.87	4.430	15.52	7.02%	2.09%	7.33%	3.503
037.42	Zinc, ICP, Open vessel (ppm)	19	18	217.9	19.59	19.70	4.766	20.27	9.07%	2.19%	9.33%	4.252
037.43	Zinc, ICP, Microwave (ppm)	34	32	217.6	16.12	14.90	6.498	16.26	6.81%	2.97%	7.43%	2.502
038.41	Molybdenum, ICP, Dry ash (ppm)	5	5	0.6416	0.0835	0.0823	0.0194	0.0846	12.83%	3.03%	13.18%	4.355
038.43	Molybdenum, ICP, Microwave (ppm)	8	8	0.6286	0.2307	0.2291	0.0386	0.2323	36.44%	6.14%	36.95%	6.015
042.00	Chloride, Titrimetric (%)	7	7	0.7225	0.0784	0.0781	0.0102	0.0788	10.81%	1.41%	10.90%	7.742
106.02	Vitamin A, LC (KU / kg)	13	12	9.135	2.097	2.079	0.9708	2.295	22.79%	10.64%	25.15%	2.364
108.02	Vitamin D3, LC (KU / kg)	6	5	1.545	0.8489	0.8280	0.2650	0.8693	53.58%	17.14%	56.25%	3.281
109.02	Vitamin E, LC (IU / kg)	16	14	98.25	22.09	15.72	2.708	15.95	15.35%	2.64%	15.58%	5.889
120.00	Alanine, Post-col Ninhydrin Der (%)	16	15	2.153	0.0757	0.0613	0.0220	0.0652	2.86%	1.03%	3.04%	2.959
120.05	Alanine, Pre-col AQC Der (%)	9	9	2.121	0.0814	0.0736	0.0492	0.0886	3.47%	2.32%	4.18%	1.800
121.00	Arginine, Post-col Ninhydrin Der (%)	16	15	1.685	0.0676	0.0639	0.0311	0.0710	3.79%	1.84%	4.21%	2.286
121.05	Arginine, Pre-col AQC Der (%)	9	9	1.651	0.2384	0.2376	0.0279	0.2392	14.39%	1.69%	14.49%	8.572
122.00	Aspartic, Post-col Ninhydrin Der (%)	16	14	2.344	0.0653	0.0622	0.0193	0.0651	2.66%	0.82%	2.78%	3.376
122.05	Aspartic, Pre-col AQC Der (%)	9	8	2.287	0.1419	0.1413	0.0185	0.1425	6.18%	0.81%	6.23%	7.692
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	17	15	0.4246	0.0317	0.0219	0.0095	0.0238	5.22%	2.27%	5.69%	2.512
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	8	8	0.4280	0.0721	0.0718	0.0093	0.0724	16.78%	2.17%	16.92%	7.812
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	16	5.091	0.2254	0.2186	0.0776	0.2320	4.29%	1.52%	4.56%	2.988
125.05	Glutamic, Pre-col AQC Der (%)	9	8	5.007	0.3596	0.3445	0.0580	0.3493	6.95%	1.17%	7.05%	6.025
126.00	Glycine, Post-col Ninhydrin Der (%)	16	16	1.958	0.0586	0.0545	0.0303	0.0624	2.79%	1.55%	3.19%	2.058
126.05	Glycine, Pre-col AQC Der (%)	9	8	1.992	0.1446	0.0957	0.0243	0.0987	4.90%	1.24%	5.05%	4.063
127.00	Histidine, Post-col Ninhydrin Der (%)	16	14	0.6880	0.0448	0.0261	0.0122	0.0288	3.86%	1.80%	4.26%	2.361
127.05	Histidine, Pre-col AQC Der (%)	9	7	0.6632	0.0923	0.0879	0.0038	0.0880	13.57%	0.58%	13.58%	23.28
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	14	1.163	0.0564	0.0465	0.0129	0.0482	4.03%	1.11%	4.18%	3.749
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	1.146	0.0923	0.0918	0.0133	0.0927	8.01%	1.16%	8.10%	6.994
129.00	Leucine, Post-col Ninhydrin Der (%)	16	14	3.129	0.0940	0.0673	0.0229	0.0711	2.16%	0.74%	2.29%	3.100
129.05	Leucine, Pre-col AQC Der (%)	9	9	3.018	0.1420	0.1393	0.0388	0.1446	4.62%	1.29%	4.79%	3.728
130.00	L-Lysine, Post-col Ninhydrin Der (%)	18	16	1.432	0.0872	0.0404	0.0228	0.0464	2.82%	1.59%	3.24%	2.031
130.05	L-Lysine, Pre-col AQC Der (%)	9	6	1.460	0.1340	0.0604	0.0201	0.0637	4.20%	1.40%	4.42%	3.166
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	16	0.7160	0.1146	0.0480	0.0111	0.0493	6.49%	1.50%	6.66%	4.437
131.05	Methionine, PAO Pre-col AQC Der (%)	9	8	0.7617	0.0830	0.0683	0.0088	0.0689	8.77%	1.13%	8.84%	7.830
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	15	1.460	0.0638	0.0458	0.0235	0.0515	3.16%	1.62%	3.55%	2.188
132.05	Phenylalanine, Pre-col AQC Der (%)	9	9	1.444	0.0748	0.0718	0.0298	0.0777	4.97%	2.06%	5.38%	2.609
133.00	Proline, Post-col Ninhydrin Der (%)	16	15	2.227	0.1292	0.1270	0.0330	0.1313	5.71%	1.48%	5.89%	3.974
133.05	Proline, Pre-col AQC Der (%)	9	8	2.207	0.0813	0.0821	0.0274	0.0866	3.71%	1.24%	3.91%	3.165
134.00	Serine, Post-col Ninhydrin Der (%)	16	16	1.366	0.1061	0.1047	0.0239	0.1074	7.67%	1.75%	7.86%	4.495
134.05	Serine, Pre-col AQC Der (%)	9	8	1.349	0.1825	0.1723	0.0169	0.1732	13.05%	1.28%	13.11%	10.25
135.00	Threonine, Post-col Ninhydrin Der (%)	16	16	1.103	0.0436	0.0407	0.0222	0.0463	3.69%	2.01%	4.20%	2.092
135.05	Threonine, Pre-col AQC Der (%)	9	8	1.101	0.1117	0.0582	0.0144	0.0599	5.13%	1.27%	5.29%	4.156
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	8	7	0.2747	0.0157	0.0159	0.0016	0.0160	5.82%	0.58%	5.85%	10.06
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	10	1.041	0.1167	0.0631	0.0204	0.0663	5.90%	1.91%	6.20%	3.249
137.05	Tyrosine, Pre-col AQC Der (%)	9	9	1.098	0.1249	0.1244	0.0162	0.1255	11.33%	1.48%	11.42%	7.746
138.00	Valine, Post-col Ninhydrin Der (%)	16	16	1.375	0.0557	0.0537	0.0209	0.0577	3.91%	1.52%	4.20%	2.755

Test Material Code # 202232

Issue Date : 01/31/2023

Method Code	Analyte and Method	Total # Labs Submitting	# Labs used in Precision Calcs	Precision Mean	Precision SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
138.05	Valine, Pre-col AQC Der (%)	9	9	1.362	0.0646	0.0637	0.0147	0.0654	4.68%	1.08%	4.80%	4.444
400.01	Water Activity, Aqualab chilled mirror (Units)	15	14	0.4481	0.0480	0.0290	0.0059	0.0296	6.34%	1.29%	6.47%	5.010

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