



AAFCO
Proficiency Testing Program



Animal Feed Scheme
Poultry Feed
Test Material Code # 201926

Method Summary Report
(Precision Report Follows)

Labs Reporting: 195
Methods Reported: 388
Issue Date : 07/31/2019

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO PT ffp - Robust sd	Uncertainty (U) - Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	1	1	0.1000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	4	3	8.965	0.1361	8.965	0.1361	0.0786	1.52%	0.0197	2.88%
001.03	Loss on Drying, Low temp. methods (%)	6	6	9.050	0.1866	9.050	0.2116	0.1080	2.34%	0.0543	2.87%
001.05	Loss on Drying, LECO (%)	2	2	9.020	0.2687						
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	49	48	8.806	0.4376	8.793	0.4035	0.0728	4.59%	0.1339	2.88%
001.99	Loss on Drying, Miscellaneous (%)	25	24	8.730	0.3948	8.772	0.3056	0.0780	3.48%	0.1201	2.88%
002.01	Protein, Crude, Auto Kjell-Foss (%)	15	14	21.69	0.2011	21.70	0.2059	0.0688	0.95%	0.1521	2.15%
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	3	3	21.46	0.1971	21.46	0.1971	0.1138	0.92%	0.1046	2.16%
002.03	Protein, Crude, Hach Method (%)	1	1	20.53							
002.04	Protein, Crude, Copper Catalyst (%)	3	3	22.01	0.4840	22.01	0.4840	0.2794	2.20%	0.2200	2.13%
002.05	Protein, Crude, Copper, Boric Acid (%)	30	29	21.65	0.3143	21.69	0.2256	0.0524	1.04%	0.0779	2.15%
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	129	127	22.04	0.4934	21.99	0.2715	0.0301	1.23%	0.2125	2.13%
002.08	Protein, Crude, Cu/Ti (%)	1	1	22.02							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	21.49							
002.11	Protein, Crude, NIR (%)	8	8	22.60	1.471	22.60	1.669	0.7374	7.38%	0.1248	2.10%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	11	11	3.769	0.1282	3.759	0.1207	0.0455	3.21%	0.1157	3.28%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	2	2	3.893	0.8804						
003.05	Fat, Crude, Distillers Method (%)	1	1	3.740							
003.06	Fat, Crude, Pet Ether (%)	20	19	3.929	0.4032	3.839	0.1712	0.0491	4.46%	0.0733	3.27%
003.07	Fat, Crude, Aqueous Extraction (%)	1	1	3.850							
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	13	11	3.799	0.2241	3.819	0.1687	0.0636	4.42%	0.0576	3.27%
003.10	Fat, Crude, Randall, Pet Ether (%)	33	32	3.647	0.1789	3.632	0.1545	0.0341	4.25%	0.0862	3.29%
003.11	Fat, Crude, NIR (%)	8	8	4.141	0.5199	4.140	0.5895	0.2605	14.24%	0.0252	3.23%
003.12	Fat, Crude, Hexane Ext (%)	4	4	3.554	0.1702	3.554	0.1702	0.0851	4.79%	0.0948	3.30%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	9	9	3.678	0.2761	3.715	0.2167	0.0903	5.83%	0.0991	3.28%
003.14	Fat, Crude, Ankom (%)	49	49	3.606	0.3088	3.633	0.2333	0.0417	6.42%	0.1462	3.29%
003.99	Fat, Crude, Miscellaneous (%)	3	2	3.830	0.5374	3.830	0.5374			0.1600	3.27%
004.00	Fiber, Crude, Asbestos Free (%)	15	15	4.217	0.3720	4.198	0.3081	0.0995	7.34%	0.1615	3.22%
004.01	Fiber, Crude, Sing Filt (%)	1	1	2.875							
004.03	Fiber, Crude, Fritted Glass (%)	4	4	4.089	1.065	4.089	1.065	0.5326	26.05%	0.1275	3.24%

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004.06	Fiber, Crude, Fibertec (%)	21	20	4.226	0.6381	4.240	0.4407	0.1232	10.39%	0.0879	3.22%
004.07	Fiber, Crude, ANKOM (%)	67	65	4.745	1.203	4.570	0.7643	0.1185	16.72%	0.2590	3.18%
004.11	Fiber, Crude, NIR (%)	6	5	4.559	0.9933	4.559	0.9933	0.5553	21.79%	0.0435	3.18%
004.99	Fiber, Crude, Miscellaneous (%)	3	3	3.522	0.5366	3.522	0.5366	0.3794	15.24%	0.0167	3.31%
005.00	Ash, 2h @ 600°C (%)	93	92	14.95	0.8444	15.10	0.5320	0.0693	3.52%	0.1749	2.57%
005.02	Ash, LECO (%)	1	1	14.74							
005.03	Ash, Microwave furnace (%)	1	1	14.35							
005.05	Ash, 3h @ 550°C (%)	36	35	15.50	0.4056	15.54	0.2799	0.0591	1.80%	0.1217	2.54%
005.11	Ash, NIR (%)	5	4	10.48	1.242	10.48	1.242	0.6212	11.85%	0.1100	2.81%
005.99	Ash, Miscellaneous (%)	10	10	14.88	1.587	15.51	0.3017	0.1192	1.95%	0.2023	2.54%
006.00	Total Sugars, As sucrose (%)	2	2	2.700	0.9758						
006.99	Total Sugars, Miscellaneous (%)	3	3	3.378	0.8342	3.378	0.8342	0.4816	24.69%	0.3567	3.33%
008.02	Fiber, Acid Detergent, Crucible (%)	14	14	5.633	0.3450	5.659	0.3221	0.1076	5.69%	0.2410	3.08%
008.05	Fiber, Acid Detergent, Acid Detergent-Hach (%)	2	2	14.22	10.09						
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	43	42	5.697	0.7092	5.641	0.6123	0.1181	10.86%	0.2625	3.08%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	3	3	6.007	0.4100	6.007	0.4100	0.2367	6.83%	0.2267	3.05%
009.04	Fiber, Neutral Detergent, Neutral Det-No ENZ Pretreat (%)	2	2	16.86	4.073						
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	13	14.95	1.195	14.95	1.355	0.4697	9.06%	0.1930	2.59%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	41	40	14.70	2.078	14.83	1.473	0.2911	9.93%	0.4230	2.60%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	2	2	13.45	1.195						
010.03	Moisture, Karl-Fischer (%)	2	2	9.168	0.0460						
010.11	Moisture, NIR (%)	4	3	9.494	1.443	9.494	1.443	0.8332	15.20%	0.0399	2.85%
010.99	Moisture, Miscellaneous (%)	15	15	8.917	0.4587	8.917	0.4345	0.1402	4.87%	0.1047	2.88%
011.01	Loss on Drying, 135°C 2hr (%)	65	61	9.405	0.4303	9.441	0.3194	0.0511	3.38%	0.0871	2.85%
011.02	Loss on Drying, 130°C for 2 hours (%)	1	1	9.315							
011.99	Loss on Drying, High Temp. Methods Miscellaneous (%)	2	2	9.113	0.4066						
012.00	Starch, Polarimetric (Ewers) (%)	17	17	28.57	0.9270	28.66	0.7918	0.2401	2.76%	0.3107	1.87%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	13	13	27.22	1.970	27.10	1.950	0.6761	7.20%	0.5405	1.92%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	6	6	28.15	1.492	28.17	1.642	0.8380	5.83%	0.6790	1.88%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	4	4	26.68	1.314	26.68	1.314	0.6570	4.93%	0.1950	1.94%
012.11	Starch, NIR (%)	5	5	29.31	2.172	29.31	2.172	0.9712	7.41%	0.1224	1.85%
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	17	17	4.523	0.4121	4.516	0.4513	0.1368	9.99%	0.1142	3.19%
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	21	21	4.827	0.4534	4.842	0.4694	0.1280	9.69%	0.1258	3.15%
013.08	Fat, Base Pretreat, Roese-Gottlieb Modified (%)	1	1	3.375							
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	5	5	4.215	0.3486	4.215	0.3486	0.1559	8.27%	0.0644	3.22%
013.12	Fat, Acid Pretreat, NIR- Acid Hydrolysis (%)	1	1	5.065							
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	5	5	5.081	0.7884	5.081	0.7884	0.3526	15.52%	0.3476	3.13%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	5	5	143.3	20.31	143.3	20.31	9.082	14.17%	6.605	7.58%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	122.7							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	9	9	134.0	17.60	134.0	19.96	8.316	14.89%	5.723	7.65%

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015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	1	1	160.0							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	5	5	10.04	2.230	10.04	2.230	0.9972	22.22%	0.5594	11.31%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	6	6	10.35	1.641	10.35	1.861	0.9497	17.99%	0.2110	11.25%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	8	8	8.855	2.973	9.473	1.687	0.7457	17.81%	0.3744	11.40%
017.53	Boron, ICP-MS, Microwave (mg / kg (ppm))	1	1	9.435							
019.00	Calcium, Ox-Mn04 Vol. (%)	10	10	4.897	0.1474	4.898	0.0831	0.0329	1.70%	0.0760	3.15%
019.02	Calcium, Hach Method (%)	2	2	4.172	0.2931						
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	4.991							
019.08	Calcium, EDTA (%)	13	13	4.719	0.5933	4.793	0.2842	0.0985	5.93%	0.0450	3.16%
019.31	Calcium, AAS, Dry ash (%)	21	20	5.017	0.3016	4.974	0.2344	0.0655	4.71%	0.0834	3.14%
019.32	Calcium, AAS, Open vessel (%)	1	1	4.725							
019.33	Calcium, AAS, Microwave (%)	1	1	5.260							
019.34	Calcium, AAS, Dry ash (%)	1	1	4.990							
019.41	Calcium, ICP, Dry ash (%)	30	29	4.863	0.3098	4.853	0.2497	0.0580	5.15%	0.0982	3.15%
019.42	Calcium, ICP, Open vessel (%)	20	20	4.848	0.3945	4.895	0.2509	0.0701	5.13%	0.1780	3.15%
019.43	Calcium, ICP, Microwave (%)	28	28	5.012	0.6858	4.868	0.2135	0.0504	4.39%	0.1001	3.15%
019.52	Calcium, ICP-MS, Open vessel (%)	2	2	4.972	0.6484						
019.53	Calcium, ICP-MS, Microwave (%)	2	2	5.255	0.1556						
019.99	Calcium, Miscellaneous (%)	6	6	4.755	0.5525	4.870	0.3346	0.1707	6.87%	0.1463	3.15%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	4	4	1.405	0.3803	1.405	0.3803	0.1901	27.07%	0.0500	15.20%
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	5	4	1.470	0.4045	1.470	0.4045	0.2022	27.51%	0.0153	15.10%
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	3	3	1.224	0.0893	1.224	0.0893	0.0516	7.30%	0.2343	15.52%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	8	8	1.447	0.3044	1.447	0.3452	0.1526	23.85%	0.1138	15.13%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.3828	0.3567						
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	3	3	1.403	0.4812	1.403	0.4812	0.2778	34.29%	0.0528	15.20%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	10	10	27.37	7.359	26.30	4.449	1.759	16.92%	0.6770	9.78%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	1	1	27.53							
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	19	19	26.13	1.741	26.05	1.644	0.4716	6.31%	0.7336	9.79%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	17	17	26.56	2.626	26.22	1.642	0.4979	6.26%	0.9976	9.78%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	22	25.72	1.480	25.68	1.580	0.4211	6.15%	0.5863	9.81%
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	2	2	24.43	0.0389						
022.99	Copper, Miscellaneous (mg / kg (ppm))	4	4	25.85	1.668	25.85	1.668	0.8340	6.45%	1.728	9.81%
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	15	14	300.5	117.8	329.3	48.46	16.19	14.72%	4.873	6.69%
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	21	20	326.0	20.78	326.4	22.77	6.363	6.97%	4.214	6.69%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	17	16	299.9	58.73	309.6	42.83	13.38	13.83%	8.981	6.75%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	20	19	332.5	22.55	331.7	21.35	6.122	6.44%	8.560	6.68%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	97.66							
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	2	2	340.8	2.556						
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	336.0	11.17	336.0	11.17	7.898	3.32%	38.00	6.67%
027.31	Magnesium, AAS, Dry ash (%)	17	16	0.2602	0.0505	0.2713	0.0118	0.0037	4.34%	0.0057	4.87%

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027.32	Magnesium, AAS, Open vessel (%)	1	1	0.2650							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.2960							
027.41	Magnesium, ICP, Dry ash (%)	24	23	0.2685	0.0142	0.2677	0.0140	0.0036	5.23%	0.0050	4.88%
027.42	Magnesium, ICP, Open vessel (%)	20	20	0.2659	0.0176	0.2670	0.0146	0.0041	5.47%	0.0057	4.88%
027.43	Magnesium, ICP, Microwave (%)	25	25	0.2705	0.0175	0.2694	0.0133	0.0033	4.95%	0.0064	4.87%
027.52	Magnesium, ICP-MS, Open vessel (%)	2	2	0.2313	0.0145						
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.2873	0.0039						
027.99	Magnesium, Miscellaneous (%)	4	3	0.2561	0.0426	0.2561	0.0426			0.0000	4.91%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	12	11	175.2	123.7	141.8	10.62	4.003	7.49%	2.326	7.59%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	1	1	160.0							
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	1	1	122.3							
028.34	Manganese, AAS, Dry ash (mg / kg (ppm))	1	1	100.0							
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	21	20	135.1	17.86	135.8	18.65	5.214	13.74%	4.154	7.64%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	18	144.3	11.84	144.7	11.18	3.293	7.72%	4.767	7.57%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	24	24	145.7	11.39	145.2	10.88	2.776	7.49%	5.440	7.56%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	1	1	137.9							
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	1	1	144.1							
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	2	2	148.4	2.942						
028.99	Manganese, Miscellaneous (mg / kg (ppm))	4	3	140.4	13.21	140.4	13.21	7.627	9.41%	1.833	7.60%
031.00	Phosphorus, Vol (%)	1	1	0.9650							
031.01	Phosphorus, Photometric (%)	43	42	0.9093	0.0444	0.9124	0.0412	0.0079	4.52%	0.0185	4.06%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	2	2	0.9275	0.0106						
031.03	Phosphorus, Autoanalyzer (%)	3	3	0.9254	0.0083	0.9254	0.0083	0.0048	0.90%	0.0091	4.05%
031.06	Phosphorus, Hach Method (%)	1	1	0.5750							
031.41	Phosphorus, ICP, Dry ash (%)	27	25	0.9205	0.0540	0.9235	0.0533	0.0133	5.77%	0.0169	4.05%
031.42	Phosphorus, ICP, Open vessel (%)	21	20	0.9271	0.0508	0.9300	0.0507	0.0142	5.45%	0.0400	4.04%
031.43	Phosphorus, ICP, Microwave (%)	26	25	0.9386	0.1382	0.9467	0.0502	0.0125	5.30%	0.0146	4.03%
031.44	Phosphorus, ICP, Dry ash (%)	1	1	0.9575							
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.8568							
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.9040	0.0693						
031.99	Phosphorus, Miscellaneous (%)	5	4	0.9338	0.0403	0.9338	0.0403	0.0201	4.31%	0.0225	4.04%
032.02	Potassium, Flame Emission (%)	1	1	2.580							
032.31	Potassium, AAS, Dry ash (%)	14	14	0.9693	0.0780	0.9642	0.0756	0.0253	7.84%	0.0192	4.02%
032.32	Potassium, AAS, Open vessel (%)	2	2	0.9250	0.1485						
032.41	Potassium, ICP, Dry ash (%)	26	25	0.9350	0.0565	0.9371	0.0587	0.0147	6.26%	0.0252	4.04%
032.42	Potassium, ICP, Open vessel (%)	20	20	0.9526	0.1161	0.9618	0.0731	0.0204	7.60%	0.0237	4.02%
032.43	Potassium, ICP, Microwave (%)	26	25	0.9936	0.0687	0.9834	0.0389	0.0097	3.95%	0.0172	4.01%
032.52	Potassium, ICP-MS, Open vessel (%)	1	1	0.7221							
032.53	Potassium, ICP-MS, Microwave (%)	2	2	0.9675	0.0389						
032.99	Potassium, Miscellaneous (%)	5	4	0.9620	0.0155	0.9620	0.0155	0.0077	1.61%	0.0310	4.02%

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033.00	Salt as chloride, Sol Cl (%)	25	24	0.4616	0.0500	0.4649	0.0452	0.0115	9.73%	0.0213	4.49%
033.01	Salt as chloride, Poten Cl (%)	31	30	0.5098	0.0326	0.5115	0.0230	0.0052	4.49%	0.0060	4.42%
033.03	Salt as chloride, Quantab (%)	6	6	0.4692	0.0510	0.4692	0.0579	0.0295	12.33%	0.0217	4.48%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	0.5258	0.2353	0.5258	0.2353	0.1664	44.74%	0.0417	4.41%
033.99	Salt, Miscellaneous (%)	9	9	0.5594	0.2209	0.5135	0.1067	0.0444	20.77%	0.0374	4.42%
034.01	Selenium, Fluor (mg / kg (ppm))	1	1	0.8115							
034.04	Selenium, AA, Hydride (mg / kg (ppm))	3	3	0.7203	0.0821	0.7203	0.0821	0.0474	11.40%	0.0287	16.81%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	4	2	1.161	0.7442	1.161	0.7442			0.0145	15.64%
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1	1	0.8500							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	3	3	1.178	0.7502	1.178	0.7502	0.5305	63.70%	0.1313	15.61%
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.6078	0.0598						
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	7	6	0.7018	0.2571	0.7776	0.0919	0.0469	11.82%	0.0112	16.61%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	1.855							
035.01	Sodium, Ion-selective electrode (%)	2	2	0.2285	0.0728						
035.05	Sodium, Flame Emission (%)	4	4	0.2149	0.0390	0.2149	0.0390	0.0195	18.13%	0.0043	5.04%
035.31	Sodium, AAS, Dry ash (%)	15	15	0.2269	0.0228	0.2275	0.0242	0.0078	10.63%	0.0066	5.00%
035.32	Sodium, AAS, Open vessel (%)	1	1	0.2150							
035.41	Sodium, ICP, Dry ash (%)	22	22	0.2155	0.0200	0.2131	0.0136	0.0036	6.38%	0.0100	5.05%
035.42	Sodium, ICP, Open vessel (%)	16	15	0.2187	0.0241	0.2155	0.0178	0.0057	8.24%	0.0083	5.04%
035.43	Sodium, ICP, Microwave (%)	21	21	0.2138	0.0132	0.2143	0.0122	0.0033	5.68%	0.0045	5.04%
035.52	Sodium, ICP-MS, Open vessel (%)	1	1	0.1933							
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.2183	0.0117						
035.99	Sodium, Miscellaneous (%)	5	4	0.2058	0.0174	0.2058	0.0174	0.0087	8.45%	0.0055	5.07%
036.04	Sulfur, LECO (%)	4	4	0.2375	0.0210	0.2375	0.0210	0.0105	8.85%	0.0050	4.97%
036.42	Sulfur, ICP, Open vessel (%)	20	19	0.2495	0.0421	0.2509	0.0301	0.0086	12.01%	0.0073	4.92%
036.43	Sulfur, ICP, Microwave (%)	15	15	0.2807	0.0806	0.2611	0.0249	0.0080	9.54%	0.0121	4.90%
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.2415							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.2640							
036.99	Sulfur, Miscellaneous (%)	2	2	0.2660	0.0198						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	13	13	148.5	11.81	148.5	13.40	4.644	9.02%	4.807	7.54%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	1	1	158.0							
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	3	3	1,102	1,631	1,102	1,631			35.70	5.57%
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	22	20	149.4	12.93	149.2	13.36	3.735	8.96%	3.457	7.53%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	19	19	151.1	13.03	150.9	12.22	3.504	8.10%	4.322	7.52%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	23	150.1	9.803	149.9	10.74	2.798	7.16%	3.303	7.53%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	1	1	127.2							
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	1	1	129.3							
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	2	2	163.8	21.54						
037.99	Zinc, Miscellaneous (mg / kg (ppm))	5	5	144.9	25.29	144.9	25.29	11.31	17.45%	5.404	7.56%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	3	3	1.173	0.0814	1.173	0.0814	0.0470	6.94%	0.0597	15.62%

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038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	4	3	1.294	0.1188	1.294	0.1188	0.0686	9.18%	0.4450	15.39%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	8	8	1.140	0.2000	1.140	0.2268	0.1002	19.90%	0.1306	15.68%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.9100							
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	3	3	1.326	0.0650	1.326	0.0650	0.0376	4.91%	0.0561	15.33%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	12.55							
040.43	Barium, ICP, Microwave (mg / kg (ppm))	1	1	19.20							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	11.79							
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	1	1	0.9110							
042.00	Chloride, Titrimetric (%)	1	1	0.3010							
042.99	Chloride, Miscellaneous (%)	1	1	0.3050							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	136.0							
102.02	Niacin, LC (mg / kg (ppm))	1	1	83.85							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	20.45							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	22.45							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	21.33	3.005						
104.03	Riboflavin, LC (mg / kg (ppm))	2	2	17.48	4.943						
105.00	Thiamine, LC (mg / kg (ppm))	2	2	4.895	0.5869						
106.01	Vitamin A, UV (KU / kg)	1	1	20.55							
106.02	Vitamin A, LC (KU / kg)	17	16	13.70	3.915	14.02	3.231	1.010	23.05%	1.314	
106.99	Vitamin A, Miscellaneous (KU / kg)	1	1	18.20							
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	57.85							
108.01	Vitamin D3, LC, AOAC (KU / kg)	1		0.0000							
108.02	Vitamin D3, LC (KU / kg)	5	2	4.173	0.9299	4.173	0.9299			0.0050	
109.02	Vitamin E, LC (IU / kg)	14	14	37.56	21.10	37.18	21.49	7.180	57.81%	3.072	
109.99	Vitamin E, Miscellaneous (IU / kg)	2	2	41.91	7.906						
112.01	Pyridoxine, LC (µg / g)	1	1	8.640							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	4.750							
113.02	Folic acid, LC (mg / kg (ppm))	1	1	3.210							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.5545							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	5.305							
120.00	Alanine, Post-col Ninhydrin Der (%)	23	22	1.183	0.0523	1.185	0.0419	0.0112	3.53%	0.0126	3.90%
120.02	Alanine, Post-col OPA Der (%)	1	1	1.173							
120.05	Alanine, Pre-col AQC Der (%)	9	9	1.188	0.0608	1.182	0.0417	0.0174	3.53%	0.0212	3.90%
120.99	Alanine, Miscellaneous (%)	1	1	1.121							
121.00	Arginine, Post-col Ninhydrin Der (%)	23	23	1.448	0.0578	1.446	0.0505	0.0132	3.49%	0.0193	3.78%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.431							
121.05	Arginine, Pre-col AQC Der (%)	8	8	1.449	0.1329	1.467	0.1052	0.0465	7.17%	0.0464	3.78%
121.99	Arginine, Miscellaneous (%)	1	1	1.300							
122.00	Aspartic, Post-col Ninhydrin Der (%)	23	22	2.027	0.0807	2.024	0.0335	0.0089	1.65%	0.0257	3.60%
122.02	Aspartic, Post-col OPA Der (%)	1	1	2.008							

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122.05	Aspartic, Pre-col AQC Der (%)	9	9	1.966	0.2055	1.999	0.1448	0.0603	7.24%	0.0624	3.60%
122.99	Aspartic, Miscellaneous (%)	1	1	1.704							
124.00	Cysteine/Cystine, PAO Post-col Ninhydry (%)	23	23	0.3175	0.0303	0.3142	0.0253	0.0066	8.04%	0.0101	4.76%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.3255							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	8	8	0.3261	0.0895	0.3402	0.0650	0.0287	19.10%	0.0174	4.70%
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.3393							
125.00	Glutamic, Post-col Ninhydrin Der (%)	23	23	3.673	0.1878	3.650	0.0846	0.0220	2.32%	0.0448	3.29%
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.640							
125.05	Glutamic, Pre-col AQC Der (%)	9	8	3.767	0.1549	3.767	0.1756	0.0776	4.66%	0.0403	3.28%
125.99	Glutamic, Miscellaneous (%)	1	1	3.903							
126.00	Glycine, Post-col Ninhydrin Der (%)	23	22	1.351	0.0389	1.351	0.0352	0.0094	2.61%	0.0225	3.82%
126.02	Glycine, Post-col OPA Der (%)	1	1	1.365							
126.05	Glycine, Pre-col AQC Der (%)	9	9	1.368	0.0580	1.368	0.0658	0.0274	4.81%	0.0357	3.82%
126.99	Glycine, Miscellaneous (%)	1	1	0.4514							
127.00	Histidine, Post-col Ninhydrin Der (%)	23	22	0.5394	0.0410	0.5361	0.0204	0.0054	3.81%	0.0104	4.39%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.5190							
127.05	Histidine, Pre-col AQC Der (%)	9	9	0.5240	0.0516	0.5284	0.0478	0.0199	9.05%	0.0178	4.40%
127.99	Histidine, Miscellaneous (%)	1	1	0.4514							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	23	22	0.8132	0.0614	0.8176	0.0483	0.0129	5.90%	0.0147	4.12%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.8300							
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	0.8612	0.0425	0.8609	0.0475	0.0198	5.52%	0.0247	4.09%
128.99	Isoleucine, Miscellaneous (%)	1	1	0.7351							
129.00	Leucine, Post-col Ninhydrin Der (%)	23	23	1.628	0.0876	1.631	0.0377	0.0098	2.31%	0.0175	3.72%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.611							
129.05	Leucine, Pre-col AQC Der (%)	9	9	1.712	0.1891	1.679	0.0730	0.0304	4.35%	0.0344	3.70%
129.99	Leucine, Miscellaneous (%)	1	1	1.341							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	25	24	1.138	0.0652	1.136	0.0580	0.0148	5.11%	0.0187	3.92%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.147							
130.05	L-Lysine, Pre-col AQC Der (%)	10	10	1.156	0.0418	1.158	0.0424	0.0167	3.66%	0.0402	3.91%
130.99	L-Lysine, Miscellaneous (%)	3	3	1.047	0.0967	1.047	0.0967	0.0684	9.24%	0.0733	3.97%
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	25	24	0.4045	0.0271	0.4087	0.0147	0.0037	3.59%	0.0092	4.58%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.4115							
131.05	Methionine, PAO Pre-col AQC Der (%)	10	10	0.4100	0.0524	0.4100	0.0595	0.0235	14.50%	0.0194	4.57%
131.99	Methionine, Miscellaneous (%)	1	1	0.4400							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	23	22	0.9627	0.0317	0.9628	0.0248	0.0066	2.57%	0.0136	4.02%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.9490							
132.05	Phenylalanine, Pre-col AQC Der (%)	9	9	0.9594	0.0635	0.9652	0.0577	0.0240	5.97%	0.0392	4.02%
132.99	Phenylalanine, Miscellaneous (%)	1	1	0.9232							
133.00	Proline, Post-col Ninhydrin Der (%)	23	23	1.378	0.0671	1.370	0.0511	0.0133	3.73%	0.0324	3.81%
133.05	Proline, Pre-col AQC Der (%)	9	9	1.390	0.0906	1.390	0.1027	0.0428	7.39%	0.0301	3.81%

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133.99	Proline, Miscellaneous (%)	1	1	1.362							
134.00	Serine, Post-col Ninhydrin Der (%)	23	22	1.009	0.0540	1.009	0.0484	0.0129	4.80%	0.0114	3.99%
134.02	Serine, Post-col OPA Der (%)	1	1	0.9900							
134.05	Serine, Pre-col AQC Der (%)	8	8	1.014	0.0439	1.014	0.0498	0.0220	4.92%	0.0255	3.99%
134.99	Serine, Miscellaneous (%)	1	1	0.8708							
135.00	Threonine, Post-col Ninhydrin Der (%)	23	22	0.7958	0.0282	0.7944	0.0242	0.0065	3.05%	0.0144	4.14%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.7920							
135.05	Threonine, Pre-col AQC Der (%)	9	9	0.7685	0.0926	0.7685	0.1050	0.0437	13.66%	0.0172	4.16%
135.99	Threonine, Miscellaneous (%)	1	1	0.6364							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	8	8	0.2404	0.0351	0.2404	0.0398	0.0176	16.56%	0.0085	4.96%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	3	3	0.2442	0.0121	0.2442	0.0121	0.0070	4.94%	0.0030	4.95%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.2425							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	6	6	0.2613	0.0247	0.2601	0.0251	0.0128	9.66%	0.0064	4.90%
136.05	Tryptophan, Pre-col AQC Der (%)	3	3	0.1615	0.0776	0.1615	0.0776	0.0448	48.06%	0.0303	5.26%
136.99	Tryptophan, Miscellaneous (%)	2	2	0.3387	0.1607						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	17	17	0.6378	0.0723	0.6363	0.0743	0.0225	11.68%	0.0154	4.28%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.6790							
137.05	Tyrosine, Pre-col AQC Der (%)	9	9	0.6793	0.0844	0.6793	0.0957	0.0399	14.08%	0.0258	4.24%
137.99	Tyrosine, Miscellaneous (%)	1	1	0.4523							
138.00	Valine, Post-col Ninhydrin Der (%)	23	21	0.9734	0.0583	0.9798	0.0457	0.0125	4.66%	0.0199	4.01%
138.02	Valine, Post-col OPA Der (%)	1	1	1.013							
138.05	Valine, Pre-col AQC Der (%)	9	9	1.024	0.0544	1.024	0.0617	0.0257	6.02%	0.0282	3.99%
138.99	Valine, Miscellaneous (%)	1	1	0.8794							
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.1085	0.0446						
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
139.05	Taurine, Pre-col AQC Der (%)	2	2	0.1120	0.1443						
139.99	Taurine, Miscellaneous (%)	1	1	0.0156							
160.99	Fructose, Miscellaneous (%)	3	3	0.2162	0.0996	0.2162	0.0996	0.0575	46.07%	0.0183	5.04%
161.99	Galactose, Miscellaneous (%)	1		0.0000							
162.99	Glucose, Miscellaneous (%)	3	3	0.2092	0.0521	0.2092	0.0521	0.0301	24.91%	0.0623	5.06%
163.99	Lactose, Miscellaneous (%)	3									
164.99	Maltose, Miscellaneous (%)	2	1	0.2025							
165.99	Sucrose, Miscellaneous (%)	3	3	2.008	0.1289	2.008	0.1289	0.0744	6.42%	0.0837	3.60%
166.99	Raffinose, Miscellaneous (%)	2	2	0.5150	0.0212						
167.99	Stachyose, Miscellaneous (%)	2	2	0.9985	0.0898						
354.02	Decoquinat, LC (mg/kg (ppm))	1	1	29.00							
365.02	Monensin, LC (mg/kg (ppm))	1	1	0.4700							
365.05	Monensin, LC-MS/MS (mg/kg (ppm))	1	1	0.4050							
379.05	Salinomycin, LC-MS/MS (mg/kg (ppm))	1	1	120.0							
391.00	Narasin, LC-PCD (mg/kg (ppm))	4	4	87.51	7.870	87.51	7.870	3.935	8.99%	1.035	8.16%

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391.01	Narasin, LC (mg/kg (ppm))	1	1	108.0							
391.03	Narasin, LC-MS/MS (mg/kg (ppm))	6	6	94.45	51.33	99.38	46.30	23.63	46.59%	4.012	8.01%
391.99	Narasin, Miscellaneous (mg/kg (ppm))	2	2	91.80	2.051						
400.01	Water Activity, Aqualab chilled mirror (Units)	7	6	0.5671	0.0138	0.5661	0.0133	0.0068	2.35%	0.0010	
400.99	Water Activity, Miscellaneous (Units)	3	3	0.5637	0.0212	0.5637	0.0212	0.0123	3.76%	0.0020	
412.01	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	26.47							
516.00	Arsenic, Total, AA, Hydride (mg / kg (ppm))	3	3	0.1115	0.0035	0.1115	0.0035	0.0020	3.14%	0.0257	22.00%
516.43	Arsenic, Total, ICP, Microwave (mg / kg (ppm))	1	1	1.114							
516.52	Arsenic, Total, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.1000							
516.53	Arsenic, Total, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.1457	0.0291	0.1457	0.0291	0.0168	19.98%	0.0155	21.38%
518.31	Cadmium, AAS, Dry ash (mg / kg (ppm))	1		0.2000							
518.34	Cadmium, AAS, Graphite furnace (mg / kg (ppm))	1	1	0.2300							
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	3	3	0.1021	0.0154	0.1021	0.0154	0.0089	15.08%	0.0028	22.00%
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	2	2	0.1054	0.0048						
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.1050							
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.1186	0.0112	0.1186	0.0112	0.0065	9.45%	0.0157	22.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	4.278	0.4002						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	4	3	4.892	0.4593	4.892	0.4593	0.2651	9.39%	0.1100	12.60%
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	3	3	4.408	1.941	4.408	1.941	1.121	44.04%	0.1383	12.80%
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	3	3	4.496	1.803	4.496	1.803	1.041	40.09%	0.4002	12.76%
526.31	Lead, AAS, Dry ash (mg / kg (ppm))	1		0.2000							
526.34	Lead, AAS, Graphite furnace (mg / kg (ppm))	2	1	0.9700							
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	3	3	0.1999	0.0642	0.1999	0.0642	0.0371	32.13%	0.0159	20.38%
526.43	Lead, ICP, Microwave (mg / kg (ppm))	1	1	0.2436							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.1850							
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.1871	0.0043	0.1871	0.0043	0.0025	2.28%	0.0075	20.59%
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	2	2	3.358	0.4504						
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	2	2	3.309	0.1093						
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	2	2	4.247	0.6389						
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1	1	0.0035							
704.00	Caproic Acid (6:0), Miscellaneous GC (%)	1	1	0.0015							
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	0.0010							
710.01	Lauric Acid (12:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1		0.0115							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	3									
714.01	Myristic Acid (14:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0340							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	2	2	0.0255	0.0064						
716.01	Palmitic Acid (16:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.8930							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	2	2	0.7605	0.0134						
718.01	Palmitoleic Acid (9c-16:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0460							

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO PT ffp - Robust sd	Uncertainty (U) - Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	3	3	0.0377	0.0032	0.0377	0.0032			0.0000	
722.01	Stearic Acid (18:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.2380							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	2	2	0.2635	0.0050						
724.01	Oleic Acid (9c-18:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.275							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	2	2	1.074	0.0375						
726.01	Linoleic Acid (9c,12c-18:2), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.775							
726.02	Linoleic Acid (9c,12c-18:2), Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	1.425							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	3	3	1.500	0.1526	1.500	0.1526	0.0881	10.17%	0.0130	
728.01	alpha-Linolenic Acid (9c,12c,15c-18:3), Direct Methylation by Alkali Hydrolysis	1	1	0.0815							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	3	3	0.0935	0.0136	0.0935	0.0136	0.0096	14.53%	0.0010	
730.01	Arachidic Acid (20:0), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0380							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	2	1	0.0130							
732.01	Gondoic Acid (11c-20:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0405							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	2	2	0.0220	0.0028						
736.01	Arachidonic Acid (5c,8c,11c,14c-20:4), Direct Methylation by Alkali Hydrolysis	1	1	0.0000							
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (% (w/w))	1	1	0.0070							
738.01	Mead Acid (11c,14c,17c-20:3), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
740.01	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	2	2	0.0000							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	2	1	0.0080							
744.01	Erucic Acid (13c-22:1), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	1	1	0.0050							
746.01	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w))	2	2	0.0000							
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	1	1	0.0090							
750.01	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	2	2	0.0000							
752.01	Nervonic Acid (24:1) isomers, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	0.0000							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1	1	0.0050							
754.02	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Direct Methylation by Acid-Alkali Hydrolysis & GC (% (w/w))	1	1	0.0900							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	2	2	0.1000	0.0141						
756.01	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Direct Methylation by Alkali Hydrolysis & GC (% (w/w))	1	1	1.430							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	2	2	1.553	0.2015						
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.110							
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.160							
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.505							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	3.965							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	2	2	3.737	0.0820						

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.

Test Material Code # 201926

(Precision Report Follows)

Issue Date : 07/31/2019

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO PT ffp - Robust sd	Uncertainty (U) - Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
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Animal Feed Scheme

Methods Reported: 107

Poultry Feed

Labs Reporting: 195

Test Material Code # 201926

Method Precision Report

Issue Date : 07/31/2019

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 %rstd	Reproducibility %RSD	sR/sr
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	49	47	8.806	0.4376	0.3902	0.1111	0.4057	4.45%	1.27%	4.62%	3.652
001.99	Loss on Drying, Miscellaneous (%)	25	22	8.730	0.3948	0.2537	0.0975	0.2718	2.89%	1.11%	3.09%	2.788
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	13	21.69	0.2011	0.1537	0.1129	0.1907	0.71%	0.52%	0.88%	1.688
002.05	Protein, Crude, Copper, Boric Acid (%)	30	26	21.65	0.3143	0.2230	0.0603	0.2310	1.03%	0.28%	1.06%	3.831
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	129	121	22.04	0.4934	0.2767	0.1742	0.3270	1.26%	0.79%	1.49%	1.877
002.11	Protein, Crude, NIR (%)	8	8	22.60	1.471	1.469	0.1208	1.474	6.50%	0.53%	6.52%	12.20
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	11	10	3.769	0.1282	0.1199	0.0811	0.1448	3.18%	2.15%	3.83%	1.784
003.06	Fat, Crude, Pet Ether (%)	20	17	3.929	0.4032	0.1878	0.0676	0.1996	4.89%	1.76%	5.20%	2.950
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	13	10	3.799	0.2241	0.1391	0.0576	0.1506	3.61%	1.50%	3.91%	2.614
003.10	Fat, Crude, Randall, Pet Ether (%)	33	29	3.647	0.1789	0.1245	0.0694	0.1425	3.43%	1.91%	3.92%	2.054
003.13	Fat, Crude, Randall, Hexane Ext. (%)	9	8	3.678	0.2761	0.1423	0.0950	0.1711	3.79%	2.53%	4.56%	1.802
003.14	Fat, Crude, Ankom (%)	49	45	3.606	0.3088	0.1914	0.1292	0.2309	5.26%	3.55%	6.35%	1.787
004.00	Fiber, Crude, Asbestos Free (%)	15	14	4.217	0.3720	0.3607	0.1203	0.3803	8.61%	2.87%	9.08%	3.160
004.06	Fiber, Crude, Fibertec (%)	21	19	4.226	0.6381	0.4697	0.0829	0.4770	10.86%	1.92%	11.03%	5.751
004.07	Fiber, Crude, ANKOM (%)	67	59	4.745	1.203	0.7532	0.2165	0.7837	16.61%	4.77%	17.28%	3.620
005.00	Ash, 2h @ 600°C (%)	93	84	14.95	0.8444	0.5252	0.1425	0.5442	3.47%	0.94%	3.60%	3.819
005.05	Ash, 3h @ 550°C (%)	36	33	15.50	0.4056	0.3381	0.0889	0.3496	2.18%	0.57%	2.25%	3.933
005.99	Ash, Miscellaneous (%)	10	9	14.88	1.587	1.061	0.1921	1.078	6.95%	1.26%	7.06%	5.610
008.02	Fiber, Acid Detergent, Crucible (%)	14	13	5.633	0.3450	0.1910	0.2488	0.3136	3.35%	4.37%	5.51%	1.261
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	43	40	5.697	0.7092	0.6323	0.2226	0.6703	11.23%	3.95%	11.90%	3.011
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	13	14.95	1.195	1.188	0.1738	1.201	7.95%	1.16%	8.04%	6.908
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	41	38	14.70	2.078	1.297	0.3740	1.350	8.72%	2.52%	9.08%	3.610
010.99	Moisture, Miscellaneous (%)	15	15	8.917	0.4587	0.4534	0.0976	0.4638	5.09%	1.09%	5.20%	4.754
011.01	Loss on Drying, 135°C 2hr (%)	65	59	9.405	0.4303	0.3172	0.0804	0.3273	3.35%	0.85%	3.46%	4.072
012.00	Starch, Polarimetric (Ewers) (%)	17	16	28.57	0.9270	0.6223	0.3104	0.6954	2.17%	1.08%	2.42%	2.240
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	13	12	27.22	1.970	2.007	0.3373	2.036	7.35%	1.23%	7.45%	6.035
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	17	16	4.523	0.4121	0.4201	0.0937	0.4304	9.30%	2.07%	9.52%	4.594
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	21	20	4.827	0.4534	0.4368	0.1011	0.4484	9.11%	2.11%	9.35%	4.434
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	9	9	134.0	17.60	17.26	4.841	17.93	12.88%	3.61%	13.38%	3.704
019.00	Calcium, Ox-Mn04 Vol. (%)	10	10	4.897	0.1474	0.1412	0.0598	0.1534	2.88%	1.22%	3.13%	2.564
019.08	Calcium, EDTA (%)	13	12	4.719	0.5933	0.5098	0.0352	0.5110	10.59%	0.73%	10.62%	14.51
019.31	Calcium, AAS, Dry ash (%)	21	19	5.017	0.3016	0.2369	0.0787	0.2496	4.76%	1.58%	5.02%	3.173
019.41	Calcium, ICP, Dry ash (%)	30	26	4.863	0.3098	0.2458	0.0727	0.2563	5.09%	1.51%	5.31%	3.528

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
019.42	Calcium, ICP, Open vessel (%)	20	19	4.848	0.3945	0.1957	0.1487	0.2458	3.98%	3.02%	4.99%	1.653
019.43	Calcium, ICP, Microwave (%)	28	26	5.012	0.6858	0.3825	0.0843	0.3916	7.82%	1.72%	8.01%	4.646
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	10	9	27.37	7.359	3.775	0.6998	3.840	14.90%	2.76%	15.16%	5.487
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	19	18	26.13	1.741	1.345	0.6302	1.485	5.20%	2.44%	5.74%	2.356
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	17	16	26.56	2.626	1.191	1.121	1.636	4.58%	4.31%	6.29%	1.459
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	21	25.72	1.480	1.365	0.5256	1.463	5.28%	2.03%	5.66%	2.784
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	15	13	300.5	117.8	83.16	4.653	83.29	25.70%	1.44%	25.74%	17.90
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	21	20	326.0	20.78	20.60	3.849	20.95	6.32%	1.18%	6.43%	5.445
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	17	15	299.9	58.73	48.70	5.988	49.07	15.78%	1.94%	15.90%	8.195
025.43	Iron, ICP, Microwave (mg / kg (ppm))	20	18	332.5	22.55	17.77	8.325	19.62	5.39%	2.53%	5.96%	2.357
027.31	Magnesium, AAS, Dry ash (%)	17	14	0.2602	0.0505	0.0096	0.0041	0.0104	3.52%	1.52%	3.83%	2.528
027.41	Magnesium, ICP, Dry ash (%)	24	22	0.2685	0.0142	0.0124	0.0044	0.0131	4.63%	1.66%	4.92%	2.960
027.42	Magnesium, ICP, Open vessel (%)	20	19	0.2659	0.0176	0.0138	0.0062	0.0151	5.14%	2.32%	5.64%	2.426
027.43	Magnesium, ICP, Microwave (%)	25	23	0.2705	0.0175	0.0129	0.0060	0.0142	4.83%	2.25%	5.32%	2.369
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	12	10	175.2	123.7	13.46	2.656	13.72	9.75%	1.92%	9.94%	5.164
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	21	19	135.1	17.86	18.15	3.600	18.51	13.46%	2.67%	13.72%	5.140
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	17	144.3	11.84	11.02	3.318	11.51	7.70%	2.32%	8.04%	3.469
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	24	24	145.7	11.39	10.81	5.084	11.94	7.42%	3.49%	8.20%	2.349
031.01	Phosphorus, Photometric (%)	43	40	0.9093	0.0444	0.0336	0.0169	0.0376	3.67%	1.84%	4.11%	2.230
031.41	Phosphorus, ICP, Dry ash (%)	27	24	0.9205	0.0540	0.0436	0.0151	0.0462	4.71%	1.63%	4.98%	3.063
031.42	Phosphorus, ICP, Open vessel (%)	21	19	0.9271	0.0508	0.0328	0.0395	0.0513	3.51%	4.23%	5.50%	1.299
031.43	Phosphorus, ICP, Microwave (%)	26	22	0.9386	0.1382	0.0414	0.0105	0.0427	4.38%	1.12%	4.52%	4.052
032.31	Potassium, AAS, Dry ash (%)	14	13	0.9693	0.0780	0.0593	0.0170	0.0617	6.21%	1.78%	6.46%	3.620
032.41	Potassium, ICP, Dry ash (%)	26	23	0.9350	0.0565	0.0458	0.0177	0.0491	4.89%	1.88%	5.24%	2.781
032.42	Potassium, ICP, Open vessel (%)	20	19	0.9526	0.1161	0.0707	0.0211	0.0738	7.26%	2.17%	7.58%	3.489
032.43	Potassium, ICP, Microwave (%)	26	22	0.9936	0.0687	0.0472	0.0129	0.0489	4.81%	1.32%	4.99%	3.777
033.00	Salt as chloride, Sol Cl (%)	25	24	0.4616	0.0500	0.0483	0.0187	0.0517	10.45%	4.04%	11.21%	2.774
033.01	Salt as chloride, Poten Cl (%)	31	27	0.5098	0.0326	0.0233	0.0041	0.0237	4.55%	0.80%	4.62%	5.784
033.99	Salt, Miscellaneous (%)	9	8	0.5594	0.2209	0.0806	0.0325	0.0870	16.44%	6.63%	17.72%	2.672
035.31	Sodium, AAS, Dry ash (%)	15	15	0.2269	0.0228	0.0223	0.0064	0.0232	9.83%	2.81%	10.23%	3.646
035.41	Sodium, ICP, Dry ash (%)	22	21	0.2155	0.0200	0.0104	0.0089	0.0137	4.89%	4.19%	6.44%	1.536
035.42	Sodium, ICP, Open vessel (%)	16	14	0.2187	0.0241	0.0127	0.0094	0.0158	5.95%	4.41%	7.40%	1.680
035.43	Sodium, ICP, Microwave (%)	21	18	0.2138	0.0132	0.0107	0.0033	0.0112	5.01%	1.55%	5.25%	3.382
036.42	Sulfur, ICP, Open vessel (%)	20	17	0.2495	0.0421	0.0323	0.0058	0.0328	12.62%	2.27%	12.82%	5.650
036.43	Sulfur, ICP, Microwave (%)	15	14	0.2807	0.0806	0.0259	0.0102	0.0279	9.94%	3.91%	10.68%	2.730
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	13	12	148.5	11.81	10.55	3.960	11.27	7.03%	2.64%	7.51%	2.845
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	22	19	149.4	12.93	13.07	2.667	13.34	8.77%	1.79%	8.95%	5.003
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	19	18	151.1	13.03	13.16	3.613	13.65	8.72%	2.39%	9.04%	3.778
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	23	150.1	9.803	9.553	3.113	10.05	6.36%	2.07%	6.69%	3.227
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	8	8	1.140	0.2000	0.1790	0.1262	0.2190	15.70%	11.07%	19.21%	1.736
106.02	Vitamin A, LC (KU / kg)	17	15	13.70	3.915	2.631	1.244	2.911	18.26%	8.63%	20.20%	2.340
109.02	Vitamin E, LC (IU / kg)	14	14	37.56	21.10	20.99	3.032	21.20	55.88%	8.07%	56.46%	6.994
120.00	Alanine, Post-col Ninhydrin Der (%)	23	20	1.183	0.0523	0.0377	0.0095	0.0389	3.19%	0.80%	3.28%	4.100

Test Material Code # 201926

Issue Date : 07/31/2019

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
120.05	Alanine, Pre-col AQC Der (%)	9	8	1.188	0.0608	0.0345	0.0211	0.0404	2.95%	1.80%	3.45%	1.917
121.00	Arginine, Post-col Ninhydrin Der (%)	23	22	1.448	0.0578	0.0452	0.0165	0.0482	3.14%	1.15%	3.34%	2.913
122.00	Aspartic, Post-col Ninhydrin Der (%)	23	21	2.027	0.0807	0.0525	0.0199	0.0562	2.61%	0.99%	2.79%	2.826
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	23	22	0.3175	0.0303	0.0221	0.0095	0.0241	7.06%	3.04%	7.69%	2.529
125.00	Glutamic, Post-col Ninhydrin Der (%)	23	20	3.673	0.1878	0.0917	0.0241	0.0949	2.53%	0.66%	2.61%	3.941
125.05	Glutamic, Pre-col AQC Der (%)	9	8	3.767	0.1549	0.1527	0.0363	0.1570	4.05%	0.96%	4.17%	4.321
126.00	Glycine, Post-col Ninhydrin Der (%)	23	22	1.351	0.0389	0.0353	0.0229	0.0421	2.62%	1.70%	3.12%	1.839
126.05	Glycine, Pre-col AQC Der (%)	9	9	1.368	0.0580	0.0523	0.0356	0.0632	3.82%	2.60%	4.62%	1.776
127.00	Histidine, Post-col Ninhydrin Der (%)	23	21	0.5394	0.0410	0.0312	0.0088	0.0324	5.85%	1.64%	6.08%	3.706
127.05	Histidine, Pre-col AQC Der (%)	9	9	0.5240	0.0516	0.0505	0.0149	0.0527	9.64%	2.84%	10.05%	3.534
128.00	Isoleucine, Post-col Ninhydrin Der (%)	23	21	0.8132	0.0614	0.0503	0.0148	0.0524	6.13%	1.80%	6.39%	3.551
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	0.8612	0.0425	0.0393	0.0230	0.0455	4.56%	2.67%	5.28%	1.982
129.00	Leucine, Post-col Ninhydrin Der (%)	23	20	1.628	0.0876	0.0455	0.0133	0.0474	2.80%	0.82%	2.91%	3.573
129.05	Leucine, Pre-col AQC Der (%)	9	8	1.712	0.1891	0.0758	0.0362	0.0840	4.58%	2.19%	5.08%	2.319
130.00	L-Lysine, Post-col Ninhydrin Der (%)	25	23	1.138	0.0652	0.0654	0.0153	0.0672	5.76%	1.35%	5.91%	4.384
130.05	L-Lysine, Pre-col AQC Der (%)	10	9	1.156	0.0418	0.0363	0.0308	0.0476	3.13%	2.65%	4.11%	1.547
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	25	23	0.4045	0.0271	0.0145	0.0089	0.0170	3.54%	2.18%	4.16%	1.910
131.05	Methionine, PAO Pre-col AQC Der (%)	10	10	0.4100	0.0524	0.0508	0.0183	0.0540	12.39%	4.47%	13.18%	2.947
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	23	20	0.9627	0.0317	0.0177	0.0127	0.0218	1.84%	1.32%	2.26%	1.712
132.05	Phenylalanine, Pre-col AQC Der (%)	9	8	0.9594	0.0635	0.0646	0.0247	0.0691	6.71%	2.56%	7.18%	2.804
133.00	Proline, Post-col Ninhydrin Der (%)	23	21	1.378	0.0671	0.0445	0.0200	0.0488	3.25%	1.47%	3.57%	2.434
133.05	Proline, Pre-col AQC Der (%)	9	9	1.390	0.0906	0.0881	0.0301	0.0931	6.33%	2.16%	6.69%	3.094
134.00	Serine, Post-col Ninhydrin Der (%)	23	21	1.009	0.0540	0.0456	0.0091	0.0465	4.50%	0.90%	4.58%	5.118
134.05	Serine, Pre-col AQC Der (%)	8	8	1.014	0.0439	0.0397	0.0265	0.0478	3.92%	2.61%	4.71%	1.803
135.00	Threonine, Post-col Ninhydrin Der (%)	23	21	0.7958	0.0282	0.0227	0.0121	0.0257	2.86%	1.52%	3.24%	2.131
135.05	Threonine, Pre-col AQC Der (%)	9	9	0.7685	0.0926	0.0919	0.0157	0.0932	11.96%	2.05%	12.13%	5.928
136.00	Tryptophan, Alka-Hydrol Post-col Ninhydrin (%)	8	8	0.2404	0.0351	0.0347	0.0074	0.0355	14.44%	3.10%	14.77%	4.769
137.00	Tyrosine, Post-col Ninhydrin Der (%)	17	17	0.6378	0.0723	0.0716	0.0149	0.0731	11.22%	2.33%	11.46%	4.909
137.05	Tyrosine, Pre-col AQC Der (%)	9	8	0.6793	0.0844	0.0872	0.0159	0.0886	12.95%	2.36%	13.16%	5.580
138.00	Valine, Post-col Ninhydrin Der (%)	23	19	0.9734	0.0583	0.0398	0.0155	0.0427	4.05%	1.58%	4.34%	2.750
138.05	Valine, Pre-col AQC Der (%)	9	9	1.024	0.0544	0.0506	0.0284	0.0580	4.94%	2.77%	5.66%	2.042

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