



**Animal Feed Scheme
Porcine Feed, Medicated**

Test Material Code # 201922

Labs Reporting: 187

Method Summary Report

(Precision Report Follows)

Methods Reported: 409

Issue Date : 03/31/2019

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 (%)	2	1	0.1000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	5	5	9.128	1.140	9.128	1.140	0.5097	12.49%	0.0334	2.87%
001.03	Loss on Drying, Low temp. methods (%)	5	5	8.857	0.1780	8.857	0.1780	0.0796	2.01%	0.0380	2.88%
001.05	Loss on Drying, LECO (%)	2	2	8.590	0.1485						
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	46	44	8.770	0.3398	8.770	0.3092	0.0583	3.53%	0.1146	2.88%
001.99	Loss on Drying, Miscellaneous (%)	20	20	8.466	0.6151	8.535	0.4836	0.1352	5.67%	0.2962	2.90%
002.01	Protein, Crude, Auto Kjell-Foss (%)	16	15	18.21	0.2258	18.21	0.2434	0.0786	1.34%	0.1004	2.34%
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	3	3	18.20	0.3252	18.20	0.3252	0.1877	1.79%	0.1098	2.34%
002.03	Protein, Crude, Hach Method (%)	2	2	18.41	0.8146						
002.04	Protein, Crude, Copper Catalyst (%)	3	3	20.13	2.763	20.13	2.763	1.953	13.72%	0.0400	2.23%
002.05	Protein, Crude, Copper, Boric Acid (%)	31	30	18.24	0.2307	18.23	0.1760	0.0402	0.97%	0.0935	2.34%
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	124	123	18.54	0.3507	18.51	0.2175	0.0245	1.17%	0.1717	2.32%
002.08	Protein, Crude, Cu/Ti (%)	1	1	18.24							
002.11	Protein, Crude, NIR (%)	7	7	19.41	0.7389	19.40	0.8379	0.3958	4.32%	0.0919	2.27%
002.99	Protein, Crude, Miscellaneous (%)	1	1	17.96							
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	11	11	4.225	0.3668	4.288	0.2733	0.1030	6.37%	0.0599	3.21%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	3.415							
003.06	Fat, Crude, Pet Ether (%)	18	17	4.271	0.4336	4.330	0.3047	0.0924	7.04%	0.0894	3.21%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	15	15	4.458	0.2685	4.450	0.2863	0.0924	6.43%	0.0851	3.19%
003.10	Fat, Crude, Randall, Pet Ether (%)	28	27	4.206	0.3386	4.212	0.2783	0.0669	6.61%	0.1236	3.22%
003.11	Fat, Crude, NIR (%)	8	8	4.453	0.3258	4.453	0.3694	0.1633	8.29%	0.0291	3.19%
003.12	Fat, Crude, Hexane Ext (%)	5	5	4.046	0.6165	4.046	0.6165	0.2757	15.24%	0.1000	3.24%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	9	9	4.119	0.3536	4.127	0.3829	0.1595	9.28%	0.1089	3.23%
003.14	Fat, Crude, Ankom (%)	47	46	3.688	0.4925	3.694	0.4939	0.0910	13.37%	0.1222	3.29%
003.99	Fat, Crude, Miscellaneous (%)	3	3	3.825	0.9366	3.825	0.9366	0.5408	24.49%	0.0633	3.27%
004.00	Fiber, Crude, Asbestos Free (%)	16	16	2.926	0.5465	2.841	0.3535	0.1105	12.44%	0.1352	3.42%
004.01	Fiber, Crude, Sing Filt (%)	1	1	2.000							
004.03	Fiber, Crude, Fritted Glass (%)	6	6	2.675	0.5354	2.675	0.6071	0.3098	22.69%	0.0759	3.45%
004.06	Fiber, Crude, Fibertec (%)	21	20	2.959	0.3055	2.953	0.3171	0.0886	10.74%	0.0954	3.40%
004.07	Fiber, Crude, ANKOM (%)	71	70	2.811	0.4066	2.814	0.3839	0.0574	13.64%	0.1311	3.42%

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004.11	Fiber, Crude, NIR (%)	5	5	2.832	1.261	2.832	1.261	0.5639	44.52%	0.0273	3.42%
004.99	Fiber, Crude, Miscellaneous (%)	3	3	2.735	0.5227	2.735	0.5227	0.3018	19.11%	0.1233	3.44%
005.00	Ash, 2h @ 600°C (%)	92	91	9.612	0.4941	9.614	0.4125	0.0540	4.29%	0.1024	2.85%
005.02	Ash, LECO (%)	1	1	10.18							
005.05	Ash, 3h @ 550°C (%)	35	35	9.932	0.2624	9.952	0.2359	0.0498	2.37%	0.0992	2.83%
005.11	Ash, NIR (%)	4	4	7.833	1.838	7.833	1.838	0.9189	23.46%	0.1258	2.93%
005.99	Ash, Miscellaneous (%)	7	7	9.524	0.9204	9.644	0.7464	0.3526	7.74%	0.2452	2.84%
006.00	Total Sugars, As sucrose (%)	1	1	7.055							
006.01	Total Sugars, Mod. Fehling Soln (%)	1	1	9.215							
006.03	Total Sugars, Invert w/o Invrns (%)	1	1	7.425							
006.99	Total Sugars, Miscellaneous (%)	4	3	7.881	0.5184	7.881	0.5184	0.2993	6.58%	0.1987	2.93%
008.02	Fiber, Acid Detergent, Crucible (%)	14	13	4.037	0.4725	4.039	0.5303	0.1839	13.13%	0.0533	3.24%
008.05	Fiber, Acid Detergent, Acid Detergent-Hach (%)	1	1	4.725							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	43	43	4.089	0.6305	4.078	0.6025	0.1148	14.77%	0.1343	3.24%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	2	2	4.025	0.2475						
009.04	Fiber, Neutral Detergent, Neutral Det-No ENZ Pretreat (%)	2	2	14.42	10.18						
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	14	8.014	1.343	7.894	1.100	0.3676	13.94%	0.3528	2.93%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	43	43	7.662	1.111	7.518	0.8161	0.1556	10.86%	0.1897	2.95%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	2	2	6.868	2.111						
010.03	Moisture, Karl-Fischer (%)	2	2	8.838	0.0601						
010.11	Moisture, NIR (%)	5	4	9.539	0.7992	9.539	0.7992	0.3996	8.38%	0.1223	2.85%
010.99	Moisture, Miscellaneous (%)	17	17	8.865	0.5211	8.824	0.4720	0.1431	5.35%	0.0883	2.88%
011.01	Loss on Drying, 135°C 2hr (%)	65	64	9.522	0.4563	9.585	0.2921	0.0456	3.05%	0.0789	2.85%
011.02	Loss on Drying, 130°C for 2 hours (%)	4	4	9.385	0.4973	9.385	0.4973	0.2487	5.30%	0.0700	2.86%
011.99	Loss on Drying, High Temp. Methods Miscellaneous (%)	2	2	9.358	0.3642						
012.00	Starch, Polarimetric (Ewers) (%)	18	18	37.36	0.5009	37.38	0.5145	0.1516	1.38%	0.4194	1.64%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	10	34.55	4.201	35.06	3.444	1.361	9.82%	0.7709	1.69%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	6	6	36.65	1.576	36.65	1.787	0.9122	4.88%	1.000	1.65%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	4	4	34.76	3.493	34.76	3.493	1.746	10.05%	0.3625	1.70%
012.11	Starch, NIR (%)	4	4	35.21	1.884	35.21	1.884	0.9418	5.35%	0.0840	1.69%
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	19	19	4.885	0.5287	4.917	0.5136	0.1473	10.44%	0.1028	3.15%
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	17	17	5.313	0.4842	5.313	0.5491	0.1665	10.34%	0.2135	3.11%
013.08	Fat, Base Pretreat, Roese-Gottlieb Modified (%)	1	1	4.346							
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	5	5	4.982	0.3670	4.982	0.3670	0.1641	7.37%	0.0662	3.14%
013.12	Fat, Acid Pretreat, NIR- Acid Hydrolysis (%)	1	1	4.555							
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	6	5	4.864	0.4382	4.864	0.4382	0.2450	9.01%	0.1400	3.15%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	5	5	171.5	20.79	171.5	20.79	9.296	12.12%	2.695	7.38%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	175.3							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	6	6	177.2	11.31	177.2	12.83	6.546	7.24%	9.843	7.34%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	144.0							

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015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	1	1	195.0							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	3	10.58	1.320	10.58	1.320	0.7620	12.47%	0.2064	11.22%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	5	5	11.27	2.144	11.27	2.144	0.9590	19.02%	0.2636	11.11%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	5	4	11.70	1.030	11.70	1.030	0.5944	8.80%	0.5775	11.05%
017.52	Boron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	9.077							
019.00	Calcium, Ox-Mn04 Vol. (%)	10	10	2.403	0.0916	2.400	0.0972	0.0384	4.05%	0.0336	3.51%
019.02	Calcium, Hach Method (%)	2	2	2.112	0.0046						
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	2.472							
019.08	Calcium, EDTA (%)	12	12	2.247	0.3159	2.286	0.2664	0.0961	11.65%	0.0343	3.53%
019.09	Calcium, Ion-selective electrode (%)	1	1	2.036							
019.31	Calcium, AAS, Dry ash (%)	17	17	2.417	0.1608	2.404	0.1216	0.0369	5.06%	0.0549	3.51%
019.32	Calcium, AAS, Open vessel (%)	1	1	2.340							
019.33	Calcium, AAS, Microwave (%)	1	1	2.500							
019.35	Calcium, AAS, Open vessel (%)	1	1	2.402							
019.41	Calcium, ICP, Dry ash (%)	28	27	2.363	0.1053	2.369	0.0989	0.0238	4.17%	0.0546	3.51%
019.42	Calcium, ICP, Open vessel (%)	20	19	2.383	0.1751	2.387	0.1440	0.0413	6.03%	0.0621	3.51%
019.43	Calcium, ICP, Microwave (%)	32	30	2.397	0.1278	2.393	0.1205	0.0275	5.04%	0.0461	3.51%
019.44	Calcium, ICP, Dry ash (%)	1	1	2.453							
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	2.380							
019.52	Calcium, ICP-MS, Open vessel (%)	4	3	2.253	0.1133	2.253	0.1133	0.0654	5.03%	0.0133	3.54%
019.53	Calcium, ICP-MS, Microwave (%)	5	5	2.337	0.1372	2.337	0.1372	0.0614	5.87%	0.0526	3.52%
019.99	Calcium, Miscellaneous (%)	4	3	2.430	0.0477	2.430	0.0477	0.0275	1.96%	0.0533	3.50%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	2	2	0.9500	0.2121						
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	4	4	1.077	0.3440	1.077	0.3440	0.1720	31.93%	0.0141	15.82%
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	3	3	1.054	0.3728	1.054	0.3728	0.2153	35.37%	0.1947	15.87%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	5	5	1.278	0.1579	1.278	0.1579	0.0706	12.36%	0.0318	15.42%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.8561	0.1055	0.8561	0.1055	0.0609	12.32%	0.0449	16.38%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	6	6	1.241	0.1762	1.241	0.1998	0.1019	16.10%	0.1092	15.49%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	8	8	177.4	23.13	179.5	21.25	9.392	11.84%	6.011	7.32%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	1	1	199.1							
022.33	Copper, AAS, Microwave (mg / kg (ppm))	2	2	198.9	26.85						
022.34	Copper, AAS, Graphite furnace (mg / kg (ppm))	1	1	294.0							
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	23	22	173.0	39.66	175.7	21.11	5.625	12.01%	6.283	7.35%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	20	20	211.6	14.21	211.3	11.19	3.129	5.30%	4.087	7.15%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	26	26	211.9	14.98	211.4	13.67	3.352	6.47%	4.391	7.15%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	2	2	169.7	7.248						
022.51	Copper, ICP-MS, Dry ash (mg / kg (ppm))	1	1	172.1							
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	3	3	209.6	3.706	209.6	3.706	2.140	1.77%	3.446	7.16%
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	5	4	199.4	16.15	199.4	16.15	8.075	8.10%	2.808	7.21%
022.99	Copper, Miscellaneous (mg / kg (ppm))	4	4	197.3	20.08	197.3	20.08	10.04	10.18%	6.000	7.22%

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025.31	Iron, AAS, Dry ash (mg / kg (ppm))	10	9	789.4	105.9	800.0	91.49	38.12	11.44%	9.052	5.85%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	1	1	435.1							
025.35	Iron, AAS, Open vessel (mg / kg (ppm))	1	1	784.0							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	25	24	762.1	127.1	784.3	67.70	17.27	8.63%	19.67	5.87%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	15	15	709.2	173.6	747.8	83.61	26.98	11.18%	24.54	5.91%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	25	23	807.3	63.08	806.0	56.35	14.69	6.99%	16.74	5.84%
025.51	Iron, ICP-MS, Dry ash (mg / kg (ppm))	1	1	737.8							
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	2	2	782.6	41.46						
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	4	4	721.5	168.0	721.5	168.0	84.00	23.28%	32.50	5.94%
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	795.3	42.80	795.3	42.80	24.71	5.38%	12.67	5.85%
027.31	Magnesium, AAS, Dry ash (%)	9	9	0.1554	0.0130	0.1561	0.0131	0.0054	8.37%	0.0050	5.29%
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.1700							
027.33	Magnesium, AAS, Microwave (%)	2	2	0.1740	0.0064						
027.41	Magnesium, ICP, Dry ash (%)	24	23	0.1609	0.0159	0.1593	0.0105	0.0027	6.57%	0.0064	5.27%
027.42	Magnesium, ICP, Open vessel (%)	19	19	0.1606	0.0116	0.1609	0.0105	0.0030	6.54%	0.0034	5.27%
027.43	Magnesium, ICP, Microwave (%)	27	27	0.1589	0.0126	0.1589	0.0143	0.0034	9.01%	0.0028	5.28%
027.51	Magnesium, ICP-MS, Dry ash (%)	1	1	0.1550							
027.52	Magnesium, ICP-MS, Open vessel (%)	4	4	0.1608	0.0288	0.1608	0.0288	0.0144	17.92%	0.0070	5.27%
027.53	Magnesium, ICP-MS, Microwave (%)	5	4	0.1576	0.0072	0.1576	0.0072	0.0036	4.56%	0.0052	5.28%
027.99	Magnesium, Miscellaneous (%)	4	4	0.1600	0.0108	0.1600	0.0108	0.0054	6.75%	0.0050	5.27%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	10	10	110.8	10.26	111.1	11.11	4.392	10.01%	2.166	7.87%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	1	1	96.69							
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	1	1	115.0							
028.34	Manganese, AAS, Dry ash (mg / kg (ppm))	1	1	47.50							
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	22	22	111.7	11.45	112.9	9.346	2.491	8.28%	4.776	7.85%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	18	118.4	10.23	117.9	10.46	3.082	8.87%	3.498	7.80%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	26	25	119.2	8.896	118.8	8.919	2.230	7.51%	3.819	7.79%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	1	1	112.8							
028.51	Manganese, ICP-MS, Dry ash (mg / kg (ppm))	1	1	111.2							
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	3	3	124.4	10.05	124.4	10.05	5.799	8.08%	6.749	7.74%
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	5	4	113.8	5.056	113.8	5.056	2.528	4.44%	3.493	7.84%
028.99	Manganese, Miscellaneous (mg / kg (ppm))	4	4	117.1	10.57	117.1	10.57	5.286	9.03%	3.525	7.81%
031.00	Phosphorus, Vol (%)	1	1	0.8500							
031.01	Phosphorus, Photometric (%)	35	33	0.8787	0.0739	0.8788	0.0366	0.0080	4.17%	0.0111	4.08%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	2	2	0.9025	0.0106						
031.03	Phosphorus, Autoanalyzer (%)	3	3	0.9045	0.0117	0.9045	0.0117	0.0068	1.30%	0.0120	4.06%
031.06	Phosphorus, Hach Method (%)	1	1	0.8700							
031.41	Phosphorus, ICP, Dry ash (%)	27	26	0.8967	0.0379	0.8975	0.0410	0.0101	4.57%	0.0164	4.07%
031.42	Phosphorus, ICP, Open vessel (%)	20	20	0.8718	0.0419	0.8744	0.0399	0.0111	4.56%	0.0194	4.08%
031.43	Phosphorus, ICP, Microwave (%)	31	31	0.9029	0.0442	0.8985	0.0370	0.0083	4.11%	0.0186	4.06%

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031.44	Phosphorus, ICP, Dry ash (%)	1	1	0.9220							
031.51	Phosphorus, ICP-MS, Dry ash (%)	1	1	0.8850							
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.7746	0.0975						
031.53	Phosphorus, ICP-MS, Microwave (%)	5	5	0.8727	0.0355	0.8727	0.0355	0.0159	4.07%	0.0196	4.08%
031.99	Phosphorus, Miscellaneous (%)	4	4	0.8463	0.0726	0.8463	0.0726	0.0363	8.58%	0.0175	4.10%
032.08	Potassium, Ion-selective electrode (%)	1	1	1.040							
032.31	Potassium, AAS, Dry ash (%)	8	8	0.9036	0.0514	0.9036	0.0583	0.0258	6.45%	0.0299	4.06%
032.32	Potassium, AAS, Open vessel (%)	3	3	0.9070	0.1122	0.9070	0.1122	0.0648	12.37%	0.0055	4.06%
032.33	Potassium, AAS, Microwave (%)	1	1	1.050							
032.41	Potassium, ICP, Dry ash (%)	25	25	0.9120	0.0403	0.9117	0.0442	0.0110	4.85%	0.0163	4.06%
032.42	Potassium, ICP, Open vessel (%)	20	19	0.9496	0.0524	0.9480	0.0481	0.0138	5.08%	0.0247	4.03%
032.43	Potassium, ICP, Microwave (%)	30	30	0.9382	0.0386	0.9351	0.0355	0.0081	3.80%	0.0170	4.04%
032.51	Potassium, ICP-MS, Dry ash (%)	1	1	0.8300							
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	0.8250	0.0934						
032.53	Potassium, ICP-MS, Microwave (%)	5	4	0.9305	0.0587	0.9305	0.0587	0.0293	6.30%	0.0098	4.04%
032.99	Potassium, Miscellaneous (%)	5	4	0.9430	0.0326	0.9430	0.0326	0.0163	3.45%	0.0115	4.04%
033.00	Salt as chloride, Sol Cl (%)	25	24	0.9923	0.0812	0.9955	0.0727	0.0185	7.30%	0.0268	4.00%
033.01	Salt as chloride, Poten Cl (%)	31	30	1.056	0.0382	1.058	0.0280	0.0064	2.65%	0.0133	3.97%
033.03	Salt as chloride, Quantab (%)	5	4	1.025	0.0444	1.025	0.0444	0.0222	4.33%	0.0350	3.98%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	1.060	0.0868	1.060	0.0868	0.0501	8.18%	0.0267	3.96%
033.99	Salt, Miscellaneous (%)	10	9	0.9458	0.0889	0.9458	0.1009	0.0420	10.66%	0.0269	4.03%
034.01	Selenium, Fluor (mg / kg (ppm))	1	1	1.055							
034.04	Selenium, AA, Hydride (mg / kg (ppm))	3	2	0.8821	0.2092	0.8821	0.2092			0.0133	16.30%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	2	2	1.315	0.5943						
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1		20.00							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	3	3	0.9019	0.4623	0.9019	0.4623	0.2669	51.26%	0.0171	16.25%
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	4	4	1.164	0.0828	1.164	0.0828	0.0414	7.11%	0.0415	15.63%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	12	11	1.126	0.2647	1.126	0.3002	0.1131	26.66%	0.0780	15.71%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	1.855							
035.01	Sodium, Ion-selective electrode (%)	2	2	0.3360	0.0014						
035.05	Sodium, Flame Emission (%)	2	2	0.3875	0.0035						
035.31	Sodium, AAS, Dry ash (%)	12	12	0.3846	0.0919	0.3606	0.0324	0.0117	9.00%	0.0136	4.66%
035.32	Sodium, AAS, Open vessel (%)	2	2	0.3530	0.0099						
035.41	Sodium, ICP, Dry ash (%)	26	26	0.3504	0.0177	0.3512	0.0183	0.0045	5.20%	0.0095	4.68%
035.42	Sodium, ICP, Open vessel (%)	16	16	0.3591	0.0215	0.3583	0.0225	0.0070	6.29%	0.0107	4.67%
035.43	Sodium, ICP, Microwave (%)	26	26	0.3549	0.0249	0.3521	0.0164	0.0040	4.66%	0.0087	4.68%
035.52	Sodium, ICP-MS, Open vessel (%)	3	3	0.3434	0.0358	0.3434	0.0358	0.0207	10.44%	0.0162	4.70%
035.53	Sodium, ICP-MS, Microwave (%)	5	5	0.3532	0.0061	0.3532	0.0061	0.0027	1.74%	0.0150	4.68%
035.99	Sodium, Miscellaneous (%)	5	5	0.3660	0.0426	0.3660	0.0426	0.0190	11.63%	0.0155	4.65%
036.04	Sulfur, LECO (%)	5	5	0.2848	0.0214	0.2848	0.0214	0.0096	7.50%	0.0136	4.83%

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036.42	Sulfur, ICP, Open vessel (%)	21	21	0.2611	0.0251	0.2583	0.0198	0.0054	7.65%	0.0079	4.90%
036.43	Sulfur, ICP, Microwave (%)	18	18	0.2626	0.0531	0.2679	0.0231	0.0068	8.63%	0.0085	4.88%
036.52	Sulfur, ICP-MS, Open vessel (%)	2	2	0.2582	0.0017						
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.2630							
036.99	Sulfur, Miscellaneous (%)	2	2	0.2632	0.0097						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	11	11	378.2	61.84	390.2	26.28	9.903	6.73%	13.43	6.52%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	1	1	364.6							
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	2	2	415.7	15.10						
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	23	23	397.0	57.71	400.8	25.16	6.558	6.28%	17.12	6.49%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	18	18	393.7	21.78	394.9	21.60	6.363	5.47%	11.80	6.51%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	27	26	406.8	34.13	407.0	33.22	8.144	8.16%	8.933	6.48%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	2	2	366.3	11.70						
037.51	Zinc, ICP-MS, Dry ash (mg / kg (ppm))	1	1	399.4							
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	3	3	378.7	57.41	378.7	57.41	33.15	15.16%	3.950	6.55%
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	5	4	391.5	56.55	391.5	56.55	28.28	14.44%	7.000	6.51%
037.99	Zinc, Miscellaneous (mg / kg (ppm))	5	5	381.2	67.15	381.2	67.15	30.03	17.62%	8.128	6.54%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	2	2	1.325	0.0214						
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	5	4	1.392	0.4119	1.392	0.4119	0.2059	29.60%	0.4265	15.22%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	6	6	1.736	0.9560	1.736	1.084	0.5532	62.44%	0.2107	14.72%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	3	3	1.462	0.1265	1.462	0.1265	0.0730	8.65%	0.0652	15.11%
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	5	5	1.481	0.0979	1.481	0.0979	0.0438	6.61%	0.0513	15.08%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	4.465							
040.52	Barium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	3.982							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	4.002							
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	1	1	2.555							
042.00	Chloride, Titrimetric (%)	1	1	0.6320							
042.99	Chloride, Miscellaneous (%)	1	1	0.6700							
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	1,542							
101.99	Choline Chloride, Miscellaneous (mg / kg (ppm))	1	1	1,206							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	123.5							
102.02	Niacin, LC (mg / kg (ppm))	2	2	81.20	31.82						
102.99	Niacin, Miscellaneous (mg / kg (ppm))	1	1	102.2							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	55.75							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	2	2	94.29	28.58						
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	22.10	0.9900						
104.03	Riboflavin, LC (mg / kg (ppm))	3	3	17.24	5.737	17.24	5.737	3.312	33.28%	1.793	10.42%
104.99	Riboflavin, Miscellaneous (mg / kg (ppm))	1	1	22.47							
105.00	Thiamine, LC (mg / kg (ppm))	1	1	2.480							
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	3.645							
106.00	Vitamin A, Color (KU / kg)	1	1	5.745							

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106.01	Vitamin A, UV (KU / kg)	2	2	3.200	2.546						
106.02	Vitamin A, LC (KU / kg)	13	12	6.576	2.315	6.576	2.625	0.9472	39.92%	1.024	
106.99	Vitamin A, Miscellaneous (KU / kg)	1	1	6.765							
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	17.30							
107.99	Vitamin B12, Miscellaneous (µg / kg (ppb))	1	1	44.00							
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	0.6000							
108.02	Vitamin D3, LC (KU / kg)	5	4	9.328	10.64	9.328	10.64	5.320	114.05%	0.1695	
108.99	Vitamin D3, Miscellaneous (KU / kg)	1	1	2.575							
109.02	Vitamin E, LC (IU / kg)	12	12	100.4	31.75	103.9	17.07	6.158	16.43%	5.047	
109.99	Vitamin E, Miscellaneous (IU / kg)	1	1	106.5							
112.01	Pyridoxine, LC (µg / g)	1	1	2.605							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.205							
113.02	Folic acid, LC (mg / kg (ppm))	1	1	0.7500							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.3190							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	3.680							
120.00	Alanine, Post-col Ninhydrin Der (%)	23	23	0.9233	0.0245	0.9235	0.0227	0.0059	2.46%	0.0152	4.05%
120.01	Alanine, Pre-col OPA Der (%)	1	1	0.9900							
120.02	Alanine, Post-col OPA Der (%)	1	1	0.9660							
120.05	Alanine, Pre-col AQC Der (%)	7	7	0.8744	0.0477	0.8744	0.0541	0.0256	6.19%	0.0271	4.08%
120.99	Alanine, Miscellaneous (%)	3	3	0.9600	0.0910	0.9600	0.0910	0.0643	9.48%	0.0333	4.02%
121.00	Arginine, Post-col Ninhydrin Der (%)	23	23	1.189	0.0452	1.184	0.0373	0.0097	3.15%	0.0165	3.90%
121.01	Arginine, Pre-col OPA Der (%)	1	1	1.170							
121.02	Arginine, Post-col OPA Der (%)	1	1	1.202							
121.05	Arginine, Pre-col AQC Der (%)	6	5	1.154	0.0685	1.154	0.0685	0.0383	5.94%	0.0088	3.91%
121.99	Arginine, Miscellaneous (%)	3	3	1.073	0.2275	1.073	0.2275	0.1313	21.19%	0.0733	3.96%
122.00	Aspartic, Post-col Ninhydrin Der (%)	23	23	1.885	0.0557	1.884	0.0449	0.0117	2.38%	0.0243	3.64%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.943							
122.05	Aspartic, Pre-col AQC Der (%)	7	7	1.739	0.3191	1.793	0.2262	0.1069	12.62%	0.0921	3.66%
122.99	Aspartic, Miscellaneous (%)	3	3	1.675	0.2435	1.675	0.2435	0.1406	14.54%	0.0479	3.70%
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	24	23	0.2906	0.0340	0.2891	0.0305	0.0080	10.56%	0.0064	4.82%
124.01	Cysteine/Cystine, PAO Pre-col OPA Der (%)	1	1	0.4050							
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.3180							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	6	5	0.2685	0.0871	0.2685	0.0871	0.0487	32.45%	0.0025	4.87%
124.99	Cysteine/Cystine, Miscellaneous (%)	2	2	0.2625	0.0389						
125.00	Glutamic, Post-col Ninhydrin Der (%)	23	23	3.266	0.1295	3.256	0.1064	0.0277	3.27%	0.0335	3.35%
125.01	Glutamic, Pre-col OPA Der (%)	1	1	2.960							
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.315							
125.05	Glutamic, Pre-col AQC Der (%)	7	6	3.127	0.2230	3.113	0.2201	0.1123	7.07%	0.0405	3.37%
125.99	Glutamic, Miscellaneous (%)	3	3	3.028	0.2875	3.028	0.2875	0.1660	9.49%	0.1033	3.39%
126.00	Glycine, Post-col Ninhydrin Der (%)	23	22	0.7974	0.0208	0.7980	0.0212	0.0056	2.65%	0.0092	4.14%

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126.01	Glycine, Pre-col OPA Der (%)	1	1	0.7900							
126.02	Glycine, Post-col OPA Der (%)	1	1	0.8190							
126.05	Glycine, Pre-col AQC Der (%)	7	7	0.7522	0.0902	0.7556	0.0944	0.0446	12.50%	0.0405	4.17%
126.99	Glycine, Miscellaneous (%)	3	3	0.6117	0.2455	0.6117	0.2455	0.1736	40.13%	0.0233	4.31%
127.00	Histidine, Post-col Ninhydrin Der (%)	23	23	0.4753	0.0221	0.4722	0.0134	0.0035	2.84%	0.0084	4.48%
127.01	Histidine, Pre-col OPA Der (%)	1	1	0.4650							
127.02	Histidine, Post-col OPA Der (%)	1	1	0.4710							
127.05	Histidine, Pre-col AQC Der (%)	7	7	0.6622	0.6420	0.4477	0.1078	0.0509	24.09%	0.0387	4.51%
127.99	Histidine, Miscellaneous (%)	3	3	0.4350	0.0912	0.4350	0.0912	0.0645	20.97%	0.0167	4.53%
128.00	Isoleucine, Post-col Ninhydrin Der (%)	23	23	0.7515	0.0518	0.7556	0.0490	0.0128	6.49%	0.0139	4.17%
128.01	Isoleucine, Pre-col OPA Der (%)	1	1	0.7600							
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.8010							
128.05	Isoleucine, Pre-col AQC Der (%)	7	7	0.7305	0.0878	0.7470	0.0571	0.0270	7.65%	0.0363	4.18%
128.99	Isoleucine, Miscellaneous (%)	4	3	0.7700	0.0265	0.7700	0.0265			0.0000	4.16%
129.00	Leucine, Post-col Ninhydrin Der (%)	23	23	1.519	0.0501	1.514	0.0410	0.0107	2.71%	0.0160	3.76%
129.01	Leucine, Pre-col OPA Der (%)	1	1	1.580							
129.02	Leucine, Post-col OPA Der (%)	1	1	1.545							
129.05	Leucine, Pre-col AQC Der (%)	7	7	1.417	0.1647	1.426	0.1652	0.0780	11.58%	0.0591	3.79%
129.99	Leucine, Miscellaneous (%)	4	3	1.482	0.0362	1.482	0.0362	0.0256	2.44%	0.0433	3.77%
130.00	L-Lysine, Post-col Ninhydrin Der (%)	24	24	1.121	0.0400	1.122	0.0420	0.0107	3.75%	0.0153	3.93%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.218							
130.05	L-Lysine, Pre-col AQC Der (%)	7	7	1.067	0.1130	1.084	0.0864	0.0408	7.98%	0.0405	3.95%
130.99	L-Lysine, Miscellaneous (%)	4	4	1.166	0.1140	1.166	0.1140	0.0570	9.78%	0.0375	3.91%
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	25	25	0.2858	0.0180	0.2871	0.0177	0.0044	6.16%	0.0079	4.83%
131.01	Methionine, PAO Pre-col OPA Der (%)	1	1	0.3000							
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.2880							
131.05	Methionine, PAO Pre-col AQC Der (%)	7	6	0.2831	0.0144	0.2831	0.0163	0.0083	5.76%	0.0015	4.84%
131.99	Methionine, Miscellaneous (%)	3	3	0.3150	0.0964	0.3150	0.0964	0.0557	30.62%	0.0100	4.76%
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	23	23	0.8757	0.0634	0.8772	0.0494	0.0129	5.64%	0.0138	4.08%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.8945							
132.05	Phenylalanine, Pre-col AQC Der (%)	7	7	0.8179	0.1100	0.8375	0.0745	0.0352	8.90%	0.0624	4.11%
132.99	Phenylalanine, Miscellaneous (%)	3	3	0.8617	0.0693	0.8617	0.0693	0.0400	8.05%	0.0167	4.09%
133.00	Proline, Post-col Ninhydrin Der (%)	23	22	1.038	0.0710	1.030	0.0538	0.0143	5.23%	0.0217	3.98%
133.05	Proline, Pre-col AQC Der (%)	8	8	1.241	0.5810	1.057	0.0947	0.0418	8.96%	0.0501	3.97%
133.99	Proline, Miscellaneous (%)	3	3	1.052	0.0333	1.052	0.0333	0.0192	3.17%	0.0500	3.97%
134.00	Serine, Post-col Ninhydrin Der (%)	23	23	0.9097	0.0547	0.9103	0.0443	0.0116	4.87%	0.0129	4.06%
134.01	Serine, Pre-col OPA Der (%)	1	1	0.9250							
134.02	Serine, Post-col OPA Der (%)	1	1	0.8125							
134.05	Serine, Pre-col AQC Der (%)	6	5	0.8758	0.0639	0.8758	0.0639	0.0357	7.30%	0.0068	4.08%
134.99	Serine, Miscellaneous (%)	3	3	0.9333	0.0407	0.9333	0.0407	0.0235	4.36%	0.0267	4.04%

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135.00	Threonine, Post-col Ninhydrin Der (%)	23	22	0.7231	0.0259	0.7213	0.0241	0.0064	3.33%	0.0090	4.20%
135.01	Threonine, Pre-col OPA Der (%)	1	1	0.8100							
135.02	Threonine, Post-col OPA Der (%)	1	1	0.7360							
135.05	Threonine, Pre-col AQC Der (%)	7	6	0.6882	0.0300	0.6920	0.0245	0.0125	3.55%	0.0113	4.23%
135.99	Threonine, Miscellaneous (%)	4	4	0.6800	0.0108	0.6800	0.0108	0.0054	1.59%	0.0150	4.24%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	9	9	0.2142	0.0240	0.2142	0.0272	0.0113	12.69%	0.0066	5.04%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	3	3	0.8622	1.081	0.8622	1.081	0.7642	125.35%	0.0230	4.09%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.2240							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	7	7	0.2172	0.0141	0.2185	0.0127	0.0060	5.82%	0.0053	5.03%
136.05	Tryptophan, Pre-col AQC Der (%)	2	2	0.1445	0.1252						
136.99	Tryptophan, Miscellaneous (%)	5	4	0.2250	0.0041	0.2250	0.0041	0.0020	1.81%	0.0150	5.01%
137.00	Tyrosine, Post-col Ninhydrin Der (%)	17	17	0.6074	0.0945	0.6065	0.0621	0.0188	10.25%	0.0147	4.31%
137.01	Tyrosine, Pre-col OPA Der (%)	1	1	0.6800							
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.6375							
137.05	Tyrosine, Pre-col AQC Der (%)	7	7	0.6210	0.0768	0.6196	0.0840	0.0397	13.56%	0.0267	4.30%
137.99	Tyrosine, Miscellaneous (%)	3	3	0.5583	0.1713	0.5583	0.1713	0.0989	30.69%	0.0300	4.37%
138.00	Valine, Post-col Ninhydrin Der (%)	23	23	0.8419	0.0505	0.8442	0.0521	0.0136	6.18%	0.0131	4.10%
138.01	Valine, Pre-col OPA Der (%)	1	1	0.8650							
138.02	Valine, Post-col OPA Der (%)	1	1	0.9045							
138.05	Valine, Pre-col AQC Der (%)	7	7	0.8092	0.0868	0.8117	0.0925	0.0437	11.40%	0.0288	4.13%
138.99	Valine, Miscellaneous (%)	4	4	0.8600	0.0621	0.8600	0.0621	0.0310	7.22%	0.0250	4.09%
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.1510	0.0834						
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
139.05	Taurine, Pre-col AQC Der (%)	1	1	0.0105							
150.00	Phytase, Colorimetric (Units / kg)	5	5	795.4	278.7	795.4	278.7	124.6	35.03%	65.78	
150.99	Phytase, Miscellaneous (Units / kg)	1	1	1,735							
160.99	Fructose, Miscellaneous (%)	5	4	0.1935	0.1260	0.1935	0.1260	0.0630	65.10%	0.0095	5.12%
161.99	Galactose, Miscellaneous (%)	2	1	0.0250							
162.99	Glucose, Miscellaneous (%)	5	3	0.1348	0.0222	0.1348	0.0222	0.0128	16.43%	0.0243	5.41%
163.99	Lactose, Miscellaneous (%)	6	6	3.399	0.2530	3.399	0.2869	0.1464	8.44%	0.1618	3.33%
164.99	Maltose, Miscellaneous (%)	4	2	0.0983	0.0187	0.0983	0.0187			0.0205	5.67%
165.99	Sucrose, Miscellaneous (%)	6	5	3.825	0.3991	3.825	0.3991	0.0522	10.43%	0.0816	3.27%
166.99	Raffinose, Miscellaneous (%)	4	4	0.5165	0.0825	0.5165	0.0825	0.0413	15.98%	0.0845	4.42%
167.99	Stachyose, Miscellaneous (%)	3	3	1.353	0.0583	1.353	0.0583	0.0336	4.31%	0.0317	3.82%
350.01	Carbadox, LC (UV or FL) (mg/kg (ppm))	4	4	52.41	3.742	52.41	3.742	1.871	7.14%	3.365	8.82%
350.02	Carbadox, LC-MS (mg/kg (ppm))	1	1	210.5							
350.03	Carbadox, LC-MS/MS (mg/kg (ppm))	3	3	52.00	40.85	52.00	40.85	23.58	78.56%	4.590	8.83%
357.01	Ethoxyquin, LC (mg/kg (ppm))	1	1	1.135							
373.06	Oxytetracycline, LC-MS/MS (mg/kg (ppm))	4	3	0.7142	0.6024	0.7142	0.6024	0.4260	84.35%	0.1030	16.83%
377.02	Pyrantel Tartrate, LC-MS (mg/kg (ppm))	1	1	408.0							

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
386.00	Tiamulin, LC (mg/kg (ppm))	5	5	100.1	22.21	100.1	22.21	9.933	22.20%	4.902	8.00%
386.01	Tiamulin, LC-MS (mg/kg (ppm))	1	1	79.50							
386.02	Tiamulin, LC-MS/MS (mg/kg (ppm))	3	3	79.93	59.50	79.93	59.50	34.35	74.44%	2.707	8.27%
388.00	Tylosin, Plate (mg/kg (ppm))	2	2	247.7	135.8						
388.03	Tylosin, LC (mg/kg (ppm))	3	3	77.83	22.97	77.83	22.97	13.26	29.51%	5.067	8.31%
388.05	Tylosin, LC-MS/MS (mg/kg (ppm))	5	4	61.55	38.20	61.55	38.20	19.10	62.07%	1.210	8.61%
389.99	Virginiamycin, Miscellaneous (mg/kg (ppm))	1	1	105.9							
400.01	Water Activity, Aqualab chilled mirror (Units)	6	6	0.5122	0.0544	0.4993	0.0285	0.0146	5.71%	0.0052	
400.99	Water Activity, Miscellaneous (Units)	2	2	0.4720	0.0021						
412.01	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	34.49							
516.00	Arsenic, Total, AA, Hydride (mg / kg (ppm))	2	2	0.2955	0.0106						
516.42	Arsenic, Total, ICP, Open vessel (mg / kg (ppm))	1	1	1.509							
516.52	Arsenic, Total, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.3296	0.0062	0.3296	0.0062	0.0036	1.87%	0.0125	18.90%
516.53	Arsenic, Total, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.3828	0.0322	0.3828	0.0365	0.0186	9.54%	0.0338	18.48%
518.31	Cadmium, AAS, Dry ash (mg / kg (ppm))	1		0.2000							
518.34	Cadmium, AAS, Graphite furnace (mg / kg (ppm))	1	1	0.1578							
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	2	2	0.1446	0.0001						
518.42	Cadmium, ICP, Open vessel (mg / kg (ppm))	1	1	2.005							
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	1	1	0.1830							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.1607	0.0040	0.1607	0.0040	0.0023	2.47%	0.0078	21.06%
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	7	7	0.1641	0.0150	0.1641	0.0170	0.0080	10.34%	0.0067	21.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	5.050	1.676						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	2	2	5.870	0.2216						
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	2	2	5.137	1.347						
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	4.103	0.8734						
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	4	3	4.806	0.8656	4.806	0.8656	0.4998	18.01%	0.2577	12.63%
526.31	Lead, AAS, Dry ash (mg / kg (ppm))	1		0.2000							
526.34	Lead, AAS, Graphite furnace (mg / kg (ppm))	1	1	4.119							
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2	2	0.1708	0.1009						
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.1684	0.0159	0.1684	0.0159	0.0092	9.45%	0.0104	20.91%
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.1730	0.0301	0.1716	0.0309	0.0158	18.02%	0.0050	20.86%
529.99	Mercury, Miscellaneous (µg / kg (ppb))	2	1	2.469							
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	2	2	3.740	0.6533						
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	2	2	3.731	0.2560						
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	2	2	3.948	0.3063						
710.99	Lauric Acid (12:0), Miscellaneous (%) (w/w)	2	1	0.0060							
714.99	Myristic Acid (14:0), Miscellaneous (%) (w/w)	2	2	0.0520	0.0042						
716.99	Palmitic Acid (16:0), Miscellaneous (%) (w/w)	2	2	0.8475	0.0318						
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (%) (w/w)	2	2	0.0808	0.0131						
722.99	Stearic Acid (18:0), Miscellaneous (%) (w/w)	2	2	0.2370	0.0028						

Labs Reporting: 187

(Precision Report Follows)

Issue Date : 03/31/2019

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
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	2	2	1.296	0.0230						
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	2	2	1.550	0.0134						
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	2	2	0.0808	0.0011						
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	2	1	0.0125							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	2	2	0.0228	0.0032						
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1	1	0.0155							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	1	1	0.0075							
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	1		0.0050							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w))	1	1	0.0040							
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	1	1	0.0095							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	1	1	0.0175							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1		0.0050							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.1300							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	1	1	1.550							
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.230							
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.495							
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.695							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (% (w/w))	1	1	4.650							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	2	2	4.337	0.1524						

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.

Animal Feed Scheme
Porcine Feed, Medicated
Test Material Code # 201922

Method Precision Report

Methods Reported: 88
Labs Reporting: 187
Issue Date : 03/31/2019

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
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	46	41	8.770	0.3398	0.2751	0.1011	0.2931	3.14%	1.15%	3.34%	2.899
001.99	Loss on Drying, Miscellaneous (%)	20	17	8.466	0.6151	0.4806	0.1929	0.5178	5.58%	2.24%	6.01%	2.684
002.01	Protein, Crude, Auto Kjel-Foss (%)	16	15	18.21	0.2258	0.2148	0.0981	0.2362	1.18%	0.54%	1.30%	2.408
002.05	Protein, Crude, Copper, Boric Acid (%)	31	29	18.24	0.2307	0.1621	0.0958	0.1882	0.89%	0.53%	1.03%	1.965
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	124	120	18.54	0.3507	0.2059	0.1517	0.2557	1.11%	0.82%	1.38%	1.686
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	11	11	4.225	0.3668	0.3644	0.0595	0.3692	8.62%	1.41%	8.74%	6.207
003.06	Fat, Crude, Pet Ether (%)	18	14	4.271	0.4336	0.2588	0.0559	0.2647	5.93%	1.28%	6.07%	4.735
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	15	15	4.458	0.2685	0.2628	0.0782	0.2742	5.89%	1.75%	6.15%	3.505
003.10	Fat, Crude, Randall, Pet Ether (%)	28	25	4.206	0.3386	0.2750	0.1139	0.2976	6.48%	2.68%	7.01%	2.612
003.11	Fat, Crude, NIR (%)	8	8	4.453	0.3258	0.3251	0.0293	0.3264	7.30%	0.66%	7.33%	11.15
003.13	Fat, Crude, Randall, Hexane Ext. (%)	9	9	4.119	0.3536	0.3452	0.1081	0.3618	8.38%	2.63%	8.78%	3.345
003.14	Fat, Crude, Ankom (%)	47	43	3.688	0.4925	0.4404	0.1068	0.4532	11.78%	2.86%	12.12%	4.245
004.00	Fiber, Crude, Asbestos Free (%)	16	14	2.926	0.5465	0.3990	0.1072	0.4131	13.98%	3.76%	14.47%	3.852
004.06	Fiber, Crude, Fibertec (%)	21	20	2.959	0.3055	0.2983	0.0930	0.3125	10.08%	3.14%	10.56%	3.358
004.07	Fiber, Crude, ANKOM (%)	71	65	2.811	0.4066	0.3567	0.1139	0.3744	12.64%	4.04%	13.27%	3.286
005.00	Ash, 2h @ 600°C (%)	92	89	9.612	0.4941	0.4080	0.0901	0.4178	4.26%	0.94%	4.36%	4.638
005.05	Ash, 3h @ 550°C (%)	35	33	9.932	0.2624	0.2175	0.0987	0.2389	2.18%	0.99%	2.40%	2.421
008.02	Fiber, Acid Detergent, Crucible (%)	14	13	4.037	0.4725	0.4712	0.0492	0.4738	11.67%	1.22%	11.74%	9.638
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	43	41	4.089	0.6305	0.5820	0.1163	0.5935	14.37%	2.87%	14.66%	5.103
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	14	13	8.014	1.343	0.9133	0.3344	0.9725	11.79%	4.31%	12.55%	2.909
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	43	41	7.662	1.111	0.9077	0.1601	0.9217	11.98%	2.11%	12.17%	5.757
010.99	Moisture, Miscellaneous (%)	17	15	8.865	0.5211	0.4302	0.0824	0.4380	4.89%	0.94%	4.98%	5.317
011.01	Loss on Drying, 135°C 2hr (%)	65	60	9.522	0.4563	0.3157	0.0690	0.3232	3.30%	0.72%	3.38%	4.684
012.00	Starch, Polarimetric (Ewers) (%)	18	17	37.36	0.5009	0.4390	0.3816	0.5816	1.18%	1.02%	1.56%	1.524
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	9	34.55	4.201	2.526	0.7607	2.638	7.09%	2.13%	7.40%	3.468
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	19	17	4.885	0.5287	0.3915	0.0814	0.3999	7.96%	1.66%	8.13%	4.910
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	17	17	5.313	0.4842	0.4662	0.1850	0.5016	8.78%	3.48%	9.44%	2.712
019.00	Calcium, Ox-Mn04 Vol. (%)	10	10	2.403	0.0916	0.0892	0.0294	0.0939	3.71%	1.22%	3.91%	3.198
019.08	Calcium, EDTA (%)	12	12	2.247	0.3159	0.3149	0.0357	0.3169	14.02%	1.59%	14.11%	8.880
019.31	Calcium, AAS, Dry ash (%)	17	16	2.417	0.1608	0.1172	0.0561	0.1299	4.90%	2.35%	5.43%	2.315
019.41	Calcium, ICP, Dry ash (%)	28	26	2.363	0.1053	0.1023	0.0447	0.1117	4.33%	1.89%	4.73%	2.496
019.42	Calcium, ICP, Open vessel (%)	20	17	2.383	0.1751	0.1358	0.0537	0.1460	5.62%	2.22%	6.04%	2.720
019.43	Calcium, ICP, Microwave (%)	32	30	2.397	0.1278	0.1246	0.0406	0.1310	5.20%	1.69%	5.47%	3.227
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	23	21	173.0	39.66	24.82	5.714	25.47	13.82%	3.18%	14.18%	4.458
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	20	18	211.6	14.21	11.17	3.386	11.67	5.34%	1.62%	5.58%	3.446

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
022.43	Copper, ICP, Microwave (mg / kg (ppm))	26	25	211.9	14.98	15.06	3.631	15.49	7.11%	1.71%	7.32%	4.267
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	25	21	762.1	127.1	65.80	14.04	67.28	8.42%	1.80%	8.61%	4.792
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	15	14	709.2	173.6	88.64	23.71	91.76	11.85%	3.17%	12.27%	3.870
025.43	Iron, ICP, Microwave (mg / kg (ppm))	25	22	807.3	63.08	60.18	13.80	61.74	7.41%	1.70%	7.61%	4.475
027.31	Magnesium, AAS, Dry ash (%)	9	8	0.1554	0.0130	0.0091	0.0037	0.0098	5.75%	2.32%	6.20%	2.672
027.41	Magnesium, ICP, Dry ash (%)	24	22	0.1609	0.0159	0.0082	0.0068	0.0106	5.16%	4.32%	6.73%	1.556
027.42	Magnesium, ICP, Open vessel (%)	19	18	0.1606	0.0116	0.0092	0.0033	0.0098	5.69%	2.01%	6.03%	2.995
027.43	Magnesium, ICP, Microwave (%)	27	27	0.1589	0.0126	0.0124	0.0033	0.0128	7.80%	2.10%	8.08%	3.847
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	10	10	110.8	10.26	10.16	1.971	10.35	9.17%	1.78%	9.34%	5.251
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	22	21	111.7	11.45	7.210	4.912	8.724	6.35%	4.33%	7.69%	1.776
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	18	118.4	10.23	9.954	3.325	10.49	8.41%	2.81%	8.87%	3.156
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	26	25	119.2	8.896	8.516	3.640	9.261	7.14%	3.05%	7.77%	2.544
031.01	Phosphorus, Photometric (%)	35	31	0.8787	0.0739	0.0562	0.0091	0.0569	6.45%	1.04%	6.54%	6.267
031.41	Phosphorus, ICP, Dry ash (%)	27	25	0.8967	0.0379	0.0352	0.0129	0.0374	3.93%	1.44%	4.19%	2.906
031.42	Phosphorus, ICP, Open vessel (%)	20	19	0.8718	0.0419	0.0319	0.0186	0.0369	3.64%	2.12%	4.21%	1.987
031.43	Phosphorus, ICP, Microwave (%)	31	28	0.9029	0.0442	0.0356	0.0131	0.0380	3.97%	1.46%	4.23%	2.889
032.41	Potassium, ICP, Dry ash (%)	25	24	0.9120	0.0403	0.0398	0.0149	0.0425	4.36%	1.64%	4.66%	2.843
032.42	Potassium, ICP, Open vessel (%)	20	18	0.9496	0.0524	0.0407	0.0196	0.0452	4.32%	2.08%	4.79%	2.301
032.43	Potassium, ICP, Microwave (%)	30	27	0.9382	0.0386	0.0277	0.0131	0.0307	2.98%	1.41%	3.29%	2.339
033.00	Salt as chloride, Sol Cl (%)	25	22	0.9923	0.0812	0.0641	0.0245	0.0686	6.38%	2.44%	6.83%	2.796
033.01	Salt as chloride, Poten Cl (%)	31	29	1.056	0.0382	0.0268	0.0128	0.0297	2.53%	1.20%	2.80%	2.329
033.99	Salt, Miscellaneous (%)	10	8	0.9458	0.0889	0.0915	0.0200	0.0936	9.74%	2.13%	9.97%	4.673
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	12	11	1.126	0.2647	0.2598	0.0717	0.2695	23.07%	6.37%	23.94%	3.759
035.31	Sodium, AAS, Dry ash (%)	12	11	0.3846	0.0919	0.0342	0.0118	0.0361	9.49%	3.28%	10.04%	3.065
035.41	Sodium, ICP, Dry ash (%)	26	26	0.3504	0.0177	0.0164	0.0093	0.0188	4.67%	2.66%	5.38%	2.020
035.42	Sodium, ICP, Open vessel (%)	16	16	0.3591	0.0215	0.0201	0.0107	0.0228	5.60%	2.99%	6.35%	2.123
035.43	Sodium, ICP, Microwave (%)	26	25	0.3549	0.0249	0.0131	0.0080	0.0154	3.74%	2.29%	4.38%	1.917
036.42	Sulfur, ICP, Open vessel (%)	21	19	0.2611	0.0251	0.0160	0.0066	0.0173	6.21%	2.56%	6.72%	2.627
036.43	Sulfur, ICP, Microwave (%)	18	17	0.2626	0.0531	0.0276	0.0076	0.0286	10.10%	2.78%	10.47%	3.761
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	11	10	378.2	61.84	20.23	16.25	25.95	5.11%	4.11%	6.56%	1.597
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	23	21	397.0	57.71	26.54	15.55	30.77	6.57%	3.85%	7.62%	1.978
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	18	17	393.7	21.78	16.15	10.50	19.26	4.07%	2.65%	4.85%	1.834
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	27	25	406.8	34.13	34.42	7.504	35.23	8.46%	1.85%	8.66%	4.695
106.02	Vitamin A, LC (KU / kg)	13	12	6.576	2.315	2.233	0.8621	2.394	33.96%	13.11%	36.40%	2.777
109.02	Vitamin E, LC (IU / kg)	12	11	100.4	31.75	17.12	4.550	17.71	15.81%	4.20%	16.36%	3.892
120.00	Alanine, Post-col Ninhydrin Der (%)	23	21	0.9233	0.0245	0.0204	0.0101	0.0228	2.21%	1.09%	2.47%	2.253
121.00	Arginine, Post-col Ninhydrin Der (%)	23	21	1.189	0.0452	0.0354	0.0134	0.0379	3.00%	1.13%	3.21%	2.836
122.00	Aspartic, Post-col Ninhydrin Der (%)	23	21	1.885	0.0557	0.0321	0.0229	0.0394	1.70%	1.22%	2.09%	1.722
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	24	22	0.2906	0.0340	0.0282	0.0055	0.0288	9.86%	1.92%	10.04%	5.241
125.00	Glutamic, Post-col Ninhydrin Der (%)	23	23	3.266	0.1295	0.1277	0.0298	0.1312	3.91%	0.91%	4.02%	4.407
126.00	Glycine, Post-col Ninhydrin Der (%)	23	22	0.7974	0.0208	0.0200	0.0080	0.0215	2.51%	1.00%	2.70%	2.692
127.00	Histidine, Post-col Ninhydrin Der (%)	23	21	0.4753	0.0221	0.0144	0.0065	0.0158	3.04%	1.38%	3.34%	2.425
128.00	Isoleucine, Post-col Ninhydrin Der (%)	23	22	0.7515	0.0518	0.0447	0.0124	0.0464	5.91%	1.64%	6.13%	3.729

Test Material Code # 201922

Issue Date : 03/31/2019

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
129.00	Leucine, Post-col Ninhydrin Der (%)	23	22	1.519	0.0501	0.0327	0.0147	0.0359	2.17%	0.97%	2.37%	2.444
130.00	L-Lysine, Post-col Ninhydrin Der (%)	24	24	1.121	0.0400	0.0386	0.0146	0.0413	3.44%	1.30%	3.68%	2.825
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	25	24	0.2858	0.0180	0.0177	0.0070	0.0190	6.18%	2.46%	6.65%	2.708
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	23	21	0.8757	0.0634	0.0481	0.0097	0.0491	5.51%	1.11%	5.62%	5.048
133.00	Proline, Post-col Ninhydrin Der (%)	23	21	1.038	0.0710	0.0581	0.0183	0.0610	5.65%	1.78%	5.92%	3.327
134.00	Serine, Post-col Ninhydrin Der (%)	23	21	0.9097	0.0547	0.0444	0.0106	0.0456	4.85%	1.16%	4.98%	4.291
135.00	Threonine, Post-col Ninhydrin Der (%)	23	22	0.7231	0.0259	0.0252	0.0081	0.0265	3.49%	1.12%	3.67%	3.264
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	9	9	0.2142	0.0240	0.0235	0.0067	0.0244	10.96%	3.15%	11.41%	3.620
137.00	Tyrosine, Post-col Ninhydrin Der (%)	17	16	0.6074	0.0945	0.0772	0.0119	0.0781	12.43%	1.92%	12.57%	6.565
138.00	Valine, Post-col Ninhydrin Der (%)	23	22	0.8419	0.0505	0.0510	0.0107	0.0521	6.05%	1.27%	6.18%	4.853

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