

**Animal Feed Scheme**

**Beef Feed, Medicated**

**Test Material Code # 201724**

**Method Summary Report**

(Precision Report Follows)

**# Methods Reported: 353**

**# Labs Reporting: 195**

**Issue Date : 05/31/2017**

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value - Robust Mean	AAFCO PT fp - Robust sd	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	5	5	8.5209	4.3310	8.5209	4.3310	1.9369	50.83%	0.22420	2.90%
000.99	Urea, Miscellaneous (%)	2	2	5.2575	1.8491						
001.00	Loss on Drying, Vac 95°C 5 hr (%)	9	9	6.7674	0.55406	6.8181	0.50410	0.21004	7.39%	0.10283	3.00%
001.03	Loss on Drying, Low temp. methods (%)	7	6	6.7511	0.06461	6.7511	0.07326	0.03739	1.09%	0.01317	3.00%
001.05	Loss on Drying, LECO (%)	3	3	15.923	15.915	15.923	15.915	11.254	99.95%	0.02667	2.51%
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	39	39	6.8165	0.51888	6.8260	0.27822	0.05569	4.08%	0.12869	3.00%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	2	2	7.0600	0.08485						
001.99	Loss on Drying, Miscellaneous (%)	23	23	6.7818	0.50235	6.8141	0.42859	0.11171	6.29%	0.15187	3.00%
002.00	Protein, Crude (%)	2	2	34.445	0.65761						
002.01	Protein, Auto Kjel-Foss (%)	12	12	34.284	0.38234	34.293	0.40938	0.14772	1.19%	0.14953	1.71%
002.02	Protein, Semiauto Autoanalyzer (%)	3	3	33.903	1.1184	33.903	1.1184	0.64571	3.30%	0.14123	1.72%
002.03	Protein, Hach Method (%)	1	1	33.815							
002.04	Protein, Copper Catalyst (%)	5	5	35.066	1.9075	35.066	1.9075	0.85306	5.44%	0.16800	1.69%
002.05	Protein, Copper, Boric Acid (%)	36	36	34.431	0.44106	34.428	0.46854	0.09761	1.36%	0.10680	1.70%
002.06	Protein, Combustion Nitrogen Analyzer (%)	118	115	34.783	0.44275	34.797	0.29044	0.03385	0.83%	0.21748	1.70%
002.07	Protein, Block Digestion (%)	1	1	34.285							
002.08	Protein, Cu/Ti (%)	3	3	34.327	0.52525	34.327	0.52525	0.37141	1.53%	0.46770	1.71%
002.10	Protein, Block dig/distillation (%)	1	1	33.875							
002.11	Protein, NIR (%)	7	7	39.446	3.6646	39.446	4.1557	1.9634	10.54%	0.18914	1.59%
002.99	Protein, Miscellaneous (%)	2	2	34.078	0.73893						
003.00	Fat, Eth Ext., Direct (%)	12	12	1.7449	0.23533	1.7417	0.25988	0.09378	14.92%	0.07573	3.68%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	1	1	2.2950							
003.06	Fat, Pet Ether (%)	16	16	1.7247	0.21286	1.7327	0.22283	0.06964	12.86%	0.06551	3.68%
003.09	Fat, Soxtec, Eth Ext (%)	22	21	1.7672	0.31999	1.7426	0.30248	0.08251	17.36%	0.05550	3.68%
003.10	Fat, Soxtec, Pet Ether (%)	26	26	1.4734	0.27908	1.4750	0.31334	0.07681	21.24%	0.11790	3.77%
003.11	Fat, NIR (%)	8	8	1.6761	0.96358	1.6761	1.0927	0.48291	65.19%	0.03115	3.70%
003.12	Fat, Hexane Ext (%)	5	5	1.5600	0.12545	1.5600	0.12545	0.06273	8.04%	0.05600	3.74%
003.13	Fat, Soxtec, Hexane Ext. (%)	6	6	1.6488	0.31539	1.5874	0.20307	0.10363	12.79%	0.11383	3.73%
003.14	Fat, Ankom (%)	43	42	1.8130	0.38952	1.7606	0.29424	0.05675	16.71%	0.09541	3.67%
003.99	Fat, Miscellaneous (%)	4	3	1.9000	0.17896	1.9000	0.17896	0.10332	9.42%	0.13333	3.63%

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004.00	Fiber, Crude, Asbestos Free (%)	15	14	8.7306	1.0750	8.5168	0.48354	0.16154	5.68%	0.12146	2.90%
004.01	Fiber, Sing Filt (%)	1	1	9.1000							
004.03	Fiber, Fritted Glass (%)	5	5	8.3460	1.6146	8.3460	1.6146	0.72207	19.35%	0.27600	2.91%
004.06	Fiber, Fibertec (%)	27	26	8.4103	0.56868	8.4380	0.40371	0.09897	4.78%	0.10782	2.90%
004.07	Fiber, ANKOM (%)	66	64	9.8123	1.4882	9.7886	1.5505	0.24227	15.84%	0.37135	2.84%
004.11	Fiber, NIR (%)	7	6	9.8903	1.8342	10.288	1.0672	0.54462	10.37%	0.17967	2.82%
004.99	Fiber, Miscellaneous (%)	2	2	8.3500	0.14142						
005.00	Ash, 2h @ 600°C (%)	90	88	25.729	1.2126	26.012	0.59404	0.07916	2.28%	0.19947	1.96%
005.02	Ash, LECO (%)	1	1	26.420							
005.04	Ash, Acid insoluble (%)	1	1	0.49500							
005.05	Ash, 3h @ 550°C (%)	34	33	26.275	0.51289	26.361	0.34503	0.07508	1.31%	0.22286	1.95%
005.11	Ash, NIR (%)	7	7	20.603	10.817	20.603	12.267	5.7954	59.54%	0.28971	2.20%
005.99	Ash, Miscellaneous (%)	11	11	26.300	0.39753	26.322	0.39840	0.15015	1.51%	0.13727	1.95%
006.00	Total sugars, As sucrose (%)	2	2	17.570	17.211						
006.01	Total sugars, Mod. Fehling Soln (%)	1	1	6.9600							
006.99	Total sugars, Miscellaneous (%)	1	1	6.3000							
008.02	Fiber, Acid Detergent (%)	17	17	11.403	0.82114	11.469	0.54031	0.16380	4.71%	0.33463	2.77%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	11.650							
008.08	Fiber, Acid Detergent, ANKOM (%)	43	41	11.653	1.2339	11.614	1.1422	0.22297	9.83%	0.39579	2.77%
008.99	Fiber, Acid Detergent Miscellaneous (%)	5	5	11.448	1.0631	11.448	1.0631	0.47543	9.29%	0.11600	2.77%
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	20.020							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	11	10	20.900	1.6035	20.785	1.5404	0.60890	7.41%	0.21194	2.19%
009.09	Fiber, Neutral Detergent, ANKOM (%)	42	41	20.635	1.5447	20.549	1.4175	0.27672	6.90%	0.68678	2.21%
009.99	Fiber, Neutral Det Miscellaneous (%)	5	5	21.066	1.3474	21.066	1.3474	0.67370	6.40%	0.64800	2.18%
010.03	Moisture, Karl-Fischer (%)	3	3	6.3233	0.38270	6.3233	0.38270	0.22095	6.05%	0.26667	3.03%
010.11	Moisture, NIR (%)	5	5	7.2221	1.0407	7.2221	1.0407	0.46542	14.41%	0.07052	2.97%
010.99	Moisture, Miscellaneous (%)	15	15	7.3201	1.0165	7.0752	0.36226	0.11692	5.12%	0.10530	2.98%
011.01	Loss on Drying, 135°C 2hr (%)	65	64	8.0656	0.48691	8.1111	0.42091	0.06577	5.19%	0.11782	2.92%
011.02	Loss on Drying, 130°C for 2 hours (%)	2	2	8.2425	0.61872						
011.99	Loss on Drying, High Temp. Methods Miscellaneo	4	4	7.8413	0.90137	7.8413	0.90137	0.45069	11.50%	0.20250	2.93%
012.00	Starch, Polarimetric (Ewers) (%)	12	11	5.3679	1.2216	5.4443	1.2028	0.45331	22.09%	0.10534	3.10%
012.01	Starch, Megazyme (%)	10	10	5.2592	0.97830	5.2592	1.1094	0.43852	21.09%	0.17829	3.12%
012.02	Starch, Colorimetric (GOP) (%)	1	1	7.0050							
012.03	Starch, Enzymatic (%)	6	6	5.3125	1.2287	5.0800	0.63651	0.32482	12.53%	0.15702	3.13%
012.04	Starch, YSI Analyzer (%)	4	4	5.3338	0.68229	5.3338	0.68229	0.34115	12.79%	0.34250	3.11%
012.11	Starch, NIR (%)	4	4	7.2251	3.7125	7.2251	3.7125	1.8563	51.38%	0.26248	2.97%
012.99	Starch, Miscellaneous (%)	1	1	19.760							
013.00	Fat, Acid hydrolysis (%)	17	16	2.6904	0.54825	2.6804	0.59985	0.18745	22.38%	0.08040	3.45%

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013.02	Fat, Mojonner, Bak Ext (%)	19	18	3.0875	0.49446	3.1684	0.30190	0.08895	9.53%	0.12384	3.36%
013.08	Fat, Roese-Gottlieb Modified (%)	1	1	3.4000							
013.10	Fat, Soxtec-Acid Hydrolysis (%)	4	4	2.4703	0.69849	2.4703	0.69849	0.34925	28.28%	0.47633	3.49%
013.12	Fat, NIR- Acid Hydrolysis (%)	1	1	2.0534							
013.13	Fat, Ankom- Acid Hydrolysis (%)	6	6	2.3628	0.71817	2.3524	0.79024	0.40327	33.59%	0.31342	3.52%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	4	4	330.38	31.196	330.38	31.196	18.011	9.44%	9.3000	6.68%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	288.50							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	7	7	267.65	39.225	267.65	44.481	21.015	16.62%	6.1702	6.90%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	141.00							
015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	1	1	380.00							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	4	15.684	1.4304	15.684	1.4304	0.82584	9.12%	0.75750	10.57%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	4	4	15.536	0.34846	15.536	0.34846	0.17423	2.24%	0.20250	10.59%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	5	5	15.597	1.0460	15.597	1.0460	0.46779	6.71%	1.1380	10.58%
019.00	Calcium, Ox-Mn04 Vol. (%)	14	13	6.6138	0.57405	6.7516	0.26203	0.09084	3.88%	0.04424	3.00%
019.02	Calcium, Hach Method (%)	1	1	6.7500							
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	7.1514							
019.08	Calcium, EDTA (%)	7	7	6.8520	0.16665	6.8520	0.18898	0.08928	2.76%	0.04261	2.99%
019.09	Calcium, Ion-selective electrode (%)	1	1	6.7150							
019.31	Calcium, AAS, Dry ash (%)	26	26	6.8880	0.32016	6.9098	0.29961	0.07345	4.34%	0.09402	2.99%
019.32	Calcium, AAS, Open vessel (%)	6	6	7.1480	0.97254	7.0554	0.87926	0.44870	12.46%	0.08833	2.98%
019.33	Calcium, AAS, Microwave (%)	3	3	6.9980	0.28099	6.9980	0.28099	0.16223	4.02%	0.11000	2.98%
019.41	Calcium, ICP, Dry ash (%)	24	24	6.9814	0.59366	6.8818	0.34306	0.08753	4.98%	0.16521	2.99%
019.42	Calcium, ICP, Open vessel (%)	21	21	6.8101	1.3610	6.9954	0.60397	0.16475	8.63%	0.19199	2.98%
019.43	Calcium, ICP, Microwave (%)	27	26	6.7251	0.35746	6.7251	0.40535	0.09937	6.03%	0.20499	3.00%
019.44	Calcium, ICP, Dry ash (%)	2	2	6.2125	0.35002						
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	6.7556	0.30009	6.7556	0.30009	0.17326	4.44%	0.10060	3.00%
019.53	Calcium, ICP-MS, Microwave (%)	2	2	7.2050	0.67882						
019.99	Calcium, Miscellaneous (%)	3	3	7.1208	0.32646	7.1208	0.32646	0.18848	4.58%	0.21433	2.98%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	4	4	12.669	1.5539	12.669	1.5539	0.89714	12.27%	1.5425	10.92%
021.32	Cobalt, AAS, Open vessel (mg / kg (ppm))	1	1	10.500							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	1	1	6.7400							
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	5	5	9.1440	2.0142	9.1440	2.0142	1.0071	22.03%	0.48800	11.47%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	9	9	10.536	1.8915	10.536	2.1450	0.89374	20.36%	0.46223	11.22%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	3	3	9.6267	0.62132	9.6267	0.62132	0.35872	6.45%	0.48000	11.38%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	3	3	10.844	2.2845	10.844	2.2845	1.3190	21.07%	0.70953	11.17%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	17	15	482.65	24.696	483.85	21.280	6.8680	4.40%	6.1533	6.31%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	5	5	448.03	152.15	448.03	152.15	76.075	33.96%	8.4432	6.38%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	4	4	506.13	21.211	506.13	21.211	10.606	4.19%	13.250	6.27%

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022.41	Copper, ICP, Dry ash (mg / kg (ppm))	21	20	471.93	15.403	472.47	15.690	4.3854	3.32%	12.840	6.33%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	21	20	487.30	36.860	484.94	30.600	8.5529	6.31%	9.5105	6.31%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	23	481.93	43.946	484.21	35.718	9.3097	7.38%	17.703	6.31%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	2	2	455.00	2.8284						
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	3	3	415.20	48.776	415.20	48.776	28.161	11.75%	18.600	6.46%
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	2	2	473.75	16.617						
022.99	Copper, Miscellaneous (mg / kg (ppm))	4	4	491.19	8.9011	491.19	8.9011	4.4506	1.81%	9.1025	6.30%
024.01	Iodine, Elm-Cald (mg / kg (ppm))	1	1	23.000							
024.03	Iodine, Ion-selective electrode (mg / kg (ppm))	1	1	7.9000							
024.52	Iodine, ICP-MS, Open vessel (mg / kg (ppm))	1	1	17.500							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	15	15	664.74	180.40	699.16	89.313	28.826	12.77%	14.205	5.97%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	3	3	670.32	449.70	670.32	449.70	259.63	67.09%	23.506	6.01%
025.33	Iron, AAS, Microwave (mg / kg (ppm))	3	3	760.29	107.14	760.29	107.14	61.857	14.09%	52.510	5.89%
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	19	690.59	51.200	694.57	48.015	13.769	6.91%	15.846	5.98%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	15	15	570.21	164.30	592.74	132.36	42.718	22.33%	24.265	6.12%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	19	18	668.29	131.66	690.73	91.402	26.930	13.23%	15.599	5.98%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	2	2	327.38	69.837						
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	1	1	814.00							
025.99	Iron, Miscellaneous (mg / kg (ppm))	2	2	686.50	55.861						
027.31	Magnesium, AAS, Dry ash (%)	17	17	0.69340	0.09610	0.70798	0.05053	0.01532	7.14%	0.00890	4.21%
027.32	Magnesium, AAS, Open vessel (%)	6	6	0.72044	0.02523	0.72222	0.02436	0.01243	3.37%	0.00962	4.20%
027.33	Magnesium, AAS, Microwave (%)	3	3	0.72950	0.01502	0.72950	0.01502	0.00867	2.06%	0.01233	4.19%
027.41	Magnesium, ICP, Dry ash (%)	22	21	0.73976	0.06545	0.72929	0.03354	0.00915	4.60%	0.01502	4.19%
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.72805	0.07127	0.73472	0.03958	0.01106	5.39%	0.01629	4.19%
027.43	Magnesium, ICP, Microwave (%)	24	23	0.71913	0.04946	0.72248	0.04601	0.01199	6.37%	0.01710	4.20%
027.44	Magnesium, ICP, Dry ash (%)	2	2	0.68625	0.01945						
027.52	Magnesium, ICP-MS, Open vessel (%)	3	3	0.68467	0.05460	0.68467	0.05460	0.03152	7.97%	0.01900	4.23%
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.81825	0.09016						
027.99	Magnesium, Miscellaneous (%)	3	3	0.73667	0.02082	0.73667	0.02082	0.01472	2.83%	0.00667	4.19%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	15	14	409.89	96.848	432.29	30.266	10.111	7.00%	6.3450	6.42%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	5	5	359.26	123.29	359.26	123.29	61.645	34.32%	26.502	6.60%
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	3	3	433.72	21.373	433.72	21.373	12.340	4.93%	40.161	6.41%
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	20	19	417.04	29.029	419.12	27.237	7.8109	6.50%	6.4094	6.45%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	20	19	427.68	36.562	426.93	34.851	9.9943	8.16%	14.424	6.43%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	23	23	430.54	29.052	431.05	30.606	7.9773	7.10%	7.4700	6.42%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	2	2	396.50	30.406						
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	2	2	443.38	41.896						
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	2	2	433.25	3.1820						

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028.99	Manganese, Miscellaneous (mg / kg (ppm))	3	3	451.24	14.150	451.24	14.150	8.1695	3.14%	8.0300	6.38%
031.00	Phosphorus, Vol (%)	2	2	0.55750	0.06718						
031.01	Phosphorus, Photometric (%)	45	43	0.62286	0.04349	0.61931	0.03669	0.00699	5.92%	0.01551	4.30%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	2	2	0.61750	0.01061						
031.03	Phosphorus, Autoanalyzer (%)	4	4	0.59344	0.01952	0.59344	0.01952	0.00976	3.29%	0.00713	4.33%
031.06	Phosphorus, Hach Method (%)	1	1	0.66000							
031.41	Phosphorus, ICP, Dry ash (%)	24	23	0.61812	0.03645	0.61861	0.04031	0.01051	6.52%	0.01030	4.30%
031.42	Phosphorus, ICP, Open vessel (%)	22	22	0.60264	0.05432	0.60462	0.04198	0.01119	6.94%	0.02690	4.31%
031.43	Phosphorus, ICP, Microwave (%)	26	25	0.59288	0.03955	0.59259	0.04337	0.01084	7.32%	0.01756	4.33%
031.44	Phosphorus, ICP, Dry ash (%)	2	2	0.59975	0.02369						
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.56340	0.00156						
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.64725	0.00955						
031.99	Phosphorus, Miscellaneous (%)	4	4	0.59388	0.01808	0.59388	0.01808	0.01044	3.04%	0.01275	4.33%
032.02	Potassium, Flame Emission (%)	2	2	2.2875	0.14496						
032.31	Potassium, AAS, Dry ash (%)	20	19	2.3307	0.16438	2.3346	0.14390	0.04127	6.16%	0.05114	3.52%
032.32	Potassium, AAS, Open vessel (%)	4	4	2.4544	0.06120	2.4544	0.06120	0.03060	2.49%	0.00733	3.49%
032.33	Potassium, AAS, Microwave (%)	1	1	2.5650							
032.41	Potassium, ICP, Dry ash (%)	23	23	2.3957	0.12024	2.3977	0.10664	0.02779	4.45%	0.06243	3.51%
032.42	Potassium, ICP, Open vessel (%)	20	19	2.4581	0.26142	2.4853	0.15087	0.04327	6.07%	0.05262	3.49%
032.43	Potassium, ICP, Microwave (%)	26	25	2.3670	0.14377	2.3799	0.12225	0.03056	5.14%	0.04943	3.51%
032.44	Potassium, ICP, Dry ash (%)	2	2	2.2475	0.07425						
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	2.3167	0.04706						
032.53	Potassium, ICP-MS, Microwave (%)	2	2	2.4675	0.06718						
032.99	Potassium, Miscellaneous (%)	2	2	2.3925	0.05303						
033.00	Salt as chloride, Sol Cl (%)	19	18	3.8891	0.11674	3.8890	0.13205	0.03891	3.40%	0.01456	3.26%
033.01	Salt as chloride, Poten Cl (%)	26	26	4.0081	0.08396	4.0042	0.06108	0.01497	1.53%	0.03281	3.25%
033.03	Salt as chloride, Quantab (%)	5	5	3.9390	0.16111	3.9390	0.16111	0.07205	4.09%	0.31400	3.25%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	3.6200	0.30939	3.6200	0.30939	0.17863	8.55%	0.01333	3.30%
033.99	Salt, Miscellaneous (%)	10	9	3.1598	0.90891	3.1598	1.0307	0.42946	32.62%	0.11333	3.36%
034.01	Selenium, Fluor (mg / kg (ppm))	2	2	2.8345	3.4372						
034.04	Selenium, AA, Hydride (mg / kg (ppm))	7	7	4.0487	1.2829	4.0487	1.4548	0.68733	35.93%	0.25301	12.96%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	1	1	3.9350							
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1	1	5.2500							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	2	2	4.7487	0.54260						
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	6	6	4.9042	0.50794	4.9043	0.57576	0.29382	11.74%	0.16500	12.59%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	3	3	5.4664	0.38569	5.4664	0.38569	0.22268	7.06%	0.27503	12.39%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	3.8050							
035.01	Sodium, Ion-selective electrode (%)	3	3	0.76383	0.04578	0.76383	0.04578	0.02643	5.99%	0.01167	4.17%

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035.05	Sodium, Flame Emission (%)	2	2	0.82500	0.01414						
035.31	Sodium, AAS, Dry ash (%)	16	15	0.80607	0.04601	0.80601	0.05204	0.01680	6.46%	0.02153	4.13%
035.32	Sodium, AAS, Open vessel (%)	4	3	0.81125	0.01409	0.81125	0.01409	0.00813	1.74%	0.01050	4.13%
035.33	Sodium, AAS, Microwave (%)	1	1	0.78500							
035.41	Sodium, ICP, Dry ash (%)	21	21	0.80492	0.03868	0.80099	0.03431	0.00936	4.28%	0.02261	4.14%
035.42	Sodium, ICP, Open vessel (%)	16	15	0.84071	0.07329	0.83848	0.07819	0.02524	9.33%	0.01931	4.11%
035.43	Sodium, ICP, Microwave (%)	21	21	0.80209	0.04358	0.80149	0.04814	0.01313	6.01%	0.02292	4.14%
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.81760	0.00552						
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.84850	0.04384						
035.99	Sodium, Miscellaneous (%)	3	3	0.80500	0.01323	0.80500	0.01323	0.00764	1.64%	0.01000	4.13%
036.04	Sulfur, LECO (%)	5	5	0.53000	0.05809	0.53000	0.05809	0.02598	10.96%	0.02800	4.40%
036.42	Sulfur, ICP, Open vessel (%)	19	18	0.63437	0.05145	0.62532	0.03425	0.01009	5.48%	0.02088	4.29%
036.43	Sulfur, ICP, Microwave (%)	15	15	0.62733	0.05998	0.61807	0.03861	0.01246	6.25%	0.02923	4.30%
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.59050							
036.99	Sulfur, Miscellaneous (%)	1	1	0.70500							
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	19	19	1,088.3	309.62	1,177.3	79.664	22.845	6.77%	19.978	5.52%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	5	5	886.41	435.95	886.41	435.95	217.98	49.18%	10.400	5.76%
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	3	3	1,234.5	37.679	1,234.5	37.679	21.754	3.05%	69.253	5.48%
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	20	20	1,128.3	203.80	1,163.2	84.589	23.643	7.27%	30.054	5.53%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	20	19	1,135.7	125.12	1,142.4	115.40	33.093	10.10%	41.619	5.54%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	22	1,183.6	96.361	1,181.9	90.752	24.185	7.68%	30.221	5.52%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	2	2	1,091.3	61.872						
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	2	2	1,011.8	261.24						
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	2	2	1,257.5	95.459						
037.99	Zinc, Miscellaneous (mg / kg (ppm))	4	4	1,232.4	50.976	1,232.4	50.976	29.431	4.14%	17.750	5.48%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	1	1	3.0300							
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	4	4	2.5188	0.80248	2.5188	0.80248	0.40124	31.86%	0.22250	13.92%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	7	7	2.9390	0.52176	2.9390	0.59167	0.27954	20.13%	0.15033	13.60%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	2	2	2.7100	0.14849						
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	3	3	3.1384	0.71112	3.1384	0.71112	0.41057	22.66%	0.18467	13.47%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	11.975							
040.43	Barium, ICP, Microwave (mg / kg (ppm))	1	1	11.750							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	9.9549							
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	1	1	1.5800							
042.00	Chloride, Titrimetric (%)	3	3	2.4550	0.08675	2.4550	0.08675	0.06134	3.53%	0.05000	3.49%
042.02	Chloride, Ion Chromatography (%)	1	1	2.4200							
042.99	Chloride, Miscellaneous (%)	1	1	2.3100							
101.00	Choline Chloride, Microbiological (mg / kg (ppm))	2	2	1,324.6	997.65						

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101.01	Choline Chloride, Chem (mg / kg (ppm))	1	1	1,600.0							
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	933.00							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	714.00							
102.02	Niacin, LC (mg / kg (ppm))	1	1	623.39							
102.99	Niacin, Miscellaneous (mg / kg (ppm))	1	1	623.55							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	10.030							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	15.500							
103.99	Pantothenic Acid, Miscellaneous (mg / kg (ppm))	1	1	16.700							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	3.8125	0.01061						
104.03	Riboflavin, LC (mg / kg (ppm))	2	2	1.9975	0.21567						
105.00	Thiamine, LC (mg / kg (ppm))	1	1	21.170							
105.01	Thiamine, Fluorometer (mg / kg (ppm))	2	2	23.150	9.3338						
106.00	Vitamin A, Color (KU / kg)	3	3	35.347	10.113	35.347	10.113	7.1510	28.61%	3.9508	
106.01	Vitamin A, UV (KU / kg)	1	1	27.100							
106.02	Vitamin A, LC (KU / kg)	20	19	32.655	9.7368	30.407	5.3458	1.5330	17.58%	2.5729	
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	17.950							
107.99	Vitamin B12, Miscellaneous (µg / kg (ppb))	1	1	20.950							
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	5.5000							
108.02	Vitamin D3, LC (KU / kg)	5	5	6.0600	0.82174	6.0600	0.82174	0.36749	13.56%	1.3160	
108.99	Vitamin D3, Miscellaneous (KU / kg)	1	1	7,685.0							
109.02	Vitamin E, LC (IU/kg)	16	16	484.58	130.04	510.19	52.367	16.365	10.26%	14.364	
112.01	Pyridoxine, LC (µg / g)	1	1	4.6850							
112.99	Pyridoxine, Miscellaneous (µg / g)	1	1	5.5000							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.7900							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.32200							
115.00	Non Protein N (NPN), Urea + Am, Urease method	5	5	9.1940	5.9953	9.1940	5.9953	2.6812	65.21%	0.39600	2.86%
115.01	Non Protein N (NPN), Automated (%)	1	1	1.8350							
115.99	Non Protein N (NPN), Miscellaneous (%)	2	2	2.3250	0.52326						
120.00	Alanine, Post-col Ninhydrin Der (%)	19	18	0.95521	0.03976	0.95219	0.03186	0.00939	3.35%	0.01648	4.03%
120.02	Alanine, Post-col OPA Der (%)	1	1	0.96300							
120.05	Alanine, Pre-col AQC Der (%)	3	3	0.95083	0.04964	0.95083	0.04964	0.02866	5.22%	0.02033	4.03%
121.00	Arginine, Post-col Ninhydrin Der (%)	19	18	1.3573	0.03891	1.3587	0.03855	0.01136	2.84%	0.01681	3.82%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.3500							
121.05	Arginine, Pre-col AQC Der (%)	3	3	1.3677	0.06038	1.3677	0.06038	0.03486	4.41%	0.06000	3.82%
122.00	Aspartic, Post-col Ninhydrin Der (%)	19	18	1.9170	0.05837	1.9137	0.05546	0.01634	2.90%	0.02477	3.63%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.9095							
122.05	Aspartic, Pre-col AQC Der (%)	3	3	1.9482	0.00318	1.9482	0.00318	0.00225	0.16%	0.10433	3.62%
124.00	Cysteine/Cystine, PAO Post-col Ninhydry (%)	19	19	0.36968	0.06788	0.35770	0.03080	0.00883	8.61%	0.00780	4.67%

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124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.36800							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	4	4	0.35925	0.01633	0.35925	0.01633	0.00943	4.55%	0.01725	4.67%
125.00	Glutamic, Post-col Ninhydrin Der (%)	19	18	3.6652	0.09869	3.6585	0.09452	0.02785	2.58%	0.05658	3.29%
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.6960							
125.05	Glutamic, Pre-col AQC Der (%)	3	3	3.7378	0.11279	3.7378	0.11279	0.06512	3.02%	0.16300	3.28%
126.00	Glycine, Post-col Ninhydrin Der (%)	19	17	0.96900	0.02942	0.96670	0.02164	0.00656	2.24%	0.01043	4.02%
126.02	Glycine, Post-col OPA Der (%)	1	1	0.96350							
126.05	Glycine, Pre-col AQC Der (%)	3	3	0.97100	0.02816	0.97100	0.02816	0.01626	2.90%	0.04400	4.02%
127.00	Histidine, Post-col Ninhydrin Der (%)	18	18	0.53340	0.06951	0.51902	0.02800	0.00825	5.40%	0.01118	4.41%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.51250							
127.05	Histidine, Pre-col AQC Der (%)	3	3	0.48467	0.01858	0.48467	0.01858	0.01073	3.83%	0.02267	4.46%
128.00	Isoleucine, Post-col Ninhydrin Der (%)	19	18	0.82104	0.05442	0.82185	0.03820	0.01125	4.65%	0.01555	4.12%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.80050							
128.05	Isoleucine, Pre-col AQC Der (%)	3	3	0.73583	0.06136	0.73583	0.06136	0.03543	8.34%	0.03033	4.19%
129.00	Leucine, Post-col Ninhydrin Der (%)	19	18	1.4550	0.06005	1.4489	0.03889	0.01146	2.68%	0.02007	3.78%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.4415							
129.05	Leucine, Pre-col AQC Der (%)	3	3	1.4325	0.01090	1.4325	0.01090	0.00629	0.76%	0.03433	3.79%
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	19	1.0601	0.14125	1.0265	0.03608	0.01035	3.51%	0.01888	3.98%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.0395							
130.05	L-Lysine, Pre-col AQC Der (%)	4	4	0.98488	0.04346	0.98488	0.04346	0.02173	4.41%	0.03175	4.01%
130.99	L-Lysine, Miscellaneous (%)	1	1	0.89550							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	19	0.27757	0.04348	0.27125	0.02782	0.00798	10.26%	0.00663	4.87%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.27200							
131.05	Methionine, PAO Pre-col AQC Der (%)	3	3	0.25930	0.01633	0.25930	0.01633	0.00943	6.30%	0.00967	4.90%
131.99	Methionine, Miscellaneous (%)	1	1	0.26450							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	19	17	0.93292	0.03665	0.93449	0.03780	0.01146	4.05%	0.01182	4.04%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.90000							
132.05	Phenylalanine, Pre-col AQC Der (%)	3	3	0.93567	0.07966	0.93567	0.07966	0.04599	8.51%	0.05733	4.04%
133.00	Proline, Post-col Ninhydrin Der (%)	19	18	1.1854	0.17599	1.1430	0.05576	0.01643	4.88%	0.02753	3.92%
133.05	Proline, Pre-col AQC Der (%)	3	3	1.1175	0.09024	1.1175	0.09024	0.05210	8.08%	0.02100	3.93%
134.00	Serine, Post-col Ninhydrin Der (%)	19	18	0.95544	0.04116	0.95915	0.03128	0.00922	3.26%	0.01958	4.02%
134.02	Serine, Post-col OPA Der (%)	1	1	0.91450							
134.05	Serine, Pre-col AQC Der (%)	3	3	1.0450	0.06000	1.0450	0.06000	0.03464	5.74%	0.09333	3.97%
135.00	Threonine, Post-col Ninhydrin Der (%)	19	18	0.79359	0.02751	0.79294	0.02979	0.00878	3.76%	0.01899	4.14%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.77500							
135.05	Threonine, Pre-col AQC Der (%)	3	3	0.79650	0.01506	0.79650	0.01506	0.00869	1.89%	0.03500	4.14%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	6	6	0.27184	0.04525	0.27022	0.04749	0.02423	17.57%	0.01735	4.87%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	1	1	0.27500							



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136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.26050							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	4	4	0.26675	0.00780	0.26675	0.00780	0.00390	2.92%	0.00450	4.88%
136.99	Tryptophan, Miscellaneous (%)	1	1	0.26000							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	13	0.64536	0.09020	0.64250	0.07082	0.02455	11.02%	0.01252	4.28%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.65750							
137.05	Tyrosine, Pre-col AQC Der (%)	3	3	0.70667	0.08312	0.70667	0.08312	0.04799	11.76%	0.04333	4.21%
138.00	Valine, Post-col Ninhydrin Der (%)	19	19	1.0277	0.19322	0.99340	0.06783	0.01945	6.83%	0.01775	4.00%
138.02	Valine, Post-col OPA Der (%)	1	1	0.98200							
138.05	Valine, Pre-col AQC Der (%)	3	3	0.92983	0.05786	0.92983	0.05786	0.03341	6.22%	0.02633	4.04%
139.00	Taurine, Post-col Ninhydrin Der (%)	1		0.00000							
139.02	Taurine, Post-col OPA Der (%)	1		0.00000							
160.99	Fructose, Miscellaneous (%)	4	4	0.17288	0.07153	0.17288	0.07153	0.04130	41.38%	0.01025	5.21%
162.99	Glucose, Miscellaneous (%)	3	2	0.09825	0.00247	0.09825	0.00247			0.00050	5.67%
163.99	Lactose, Miscellaneous (%)	2		0.00000							
164.99	Maltose, Miscellaneous (%)	1		0.00000							
165.99	Sucrose, Miscellaneous (%)	5	5	2.8340	0.17893	2.8340	0.17893	0.08947	6.31%	0.02600	3.42%
166.99	Raffinose, Miscellaneous (%)	3	3	0.70500	0.13972	0.70500	0.13972	0.08067	19.82%	0.03867	4.22%
167.99	Stachyose, Miscellaneous (%)	3	3	1.2783	0.17609	1.2783	0.17609	0.10167	13.78%	0.09667	3.85%
351.00	Chlortetracycline, Plate (mg/kg (ppm))	5	5	290.17	45.029	290.17	45.029	20.138	15.52%	12.028	6.81%
351.03	Chlortetracycline, LC (UV or FL) (mg/kg (ppm))	9	8	274.98	55.172	260.49	20.746	9.1684	7.96%	2.3500	6.93%
351.04	Chlortetracycline, LC-MS (mg/kg (ppm))	1	1	366.00							
351.05	Chlortetracycline, LC-MS/MS (mg/kg (ppm))	2	2	238.95	92.560						
364.02	Melengestrol Acetate, LC-MS (mg/kg (ppm))	1	1	3.1850							
365.00	Monensin, Plate (mg/kg (ppm))	2	2	338.14	34.693						
365.02	Monensin, LC (mg/kg (ppm))	6	6	254.78	16.574	254.78	18.795	9.5911	7.38%	12.150	6.95%
365.03	Monensin, LC-PCD (mg/kg (ppm))	7	7	253.88	7.4270	253.88	8.4223	3.9791	3.32%	3.9396	6.95%
365.04	Monensin, LC-MS (mg/kg (ppm))	2	2	223.25	30.052						
365.05	Monensin, LC-MS/MS (mg/kg (ppm))	5	5	271.04	63.057	271.04	63.057	31.529	23.26%	43.194	6.88%
365.99	Monensin, Miscellaneous (mg/kg (ppm))	3	3	250.95	4.0009	250.95	4.0009	2.3099	1.59%	7.8333	6.96%
382.00	Sulfamethazine, Spectrophotometer (mg/kg (ppm))	1	1	350.26							
382.01	Sulfamethazine, LC (mg/kg (ppm))	2	2	314.88	23.158						
382.02	Sulfamethazine, LC-PCD (mg/kg (ppm))	1	1	286.45							
382.03	Sulfamethazine, LC-MS (mg/kg (ppm))	1	1	277.00							
382.04	Sulfamethazine, LC-MS/MS (mg/kg (ppm))	1	1	216.00							
388.00	Tylosin, Plate (mg/kg (ppm))	1	1	70.600							
388.03	Tylosin, LC (mg/kg (ppm))	3	3	55.300	32.783	55.300	32.783	18.927	59.28%	7.2000	8.74%
388.05	Tylosin, LC-MS/MS (mg/kg (ppm))	3	3	41.783	4.7504	41.783	4.7504	2.7426	11.37%	7.6333	9.12%
400.01	Water activity, Aqualab chilled mirror (Units)	7	7	0.48080	0.01353	0.47957	0.01239	0.00585	2.58%	0.00326	

**Test Material Code # 201724**

**Issue Date : 05/31/2017**

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)	Honwiz %RSD
400.99	Water activity, Miscellaneous (Units)	2	2	0.46175	0.00530						
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	1	1	0.63500							
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.72475	0.07036						
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.73649	0.10864	0.73649	0.10864	0.05432	14.75%	0.09358	16.75%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	1	1	0.04300							
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	1	1	4.4550							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.19325	0.00247						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.21203	0.01946	0.21203	0.01946	0.00973	9.18%	0.01845	20.20%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	1	1	9.8500							
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	3	3	16.570	1.7092	16.570	1.7092	0.98681	10.32%	1.2933	10.48%
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	3	3	11.508	5.0831	11.508	5.0831	2.9347	44.17%	4.6967	11.08%
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	4.0400							
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	2	2	11.018	7.3993						
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	1	1	0.16900							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.64800	0.08202						
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.60394	0.04109	0.60394	0.04109	0.02055	6.80%	0.02388	17.26%
539.42	Nickel, ICP, Open vessel (mg / kg (ppm))	2	2	5.7675	0.91570						
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	1	1	4.2400							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	1	1	4.7723							

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.



**AAFCO**  
Proficiency Testing Program



**Animal Feed Scheme**  
**Beef Feed, Medicated**  
**Test Material Code # 201724**

**Method Precision Report**

**# Methods Reported: 89**  
**# Labs Reporting: 195**  
**Issue Date : 05/31/2017**

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 (%)	9	9	6.7674	0.55406	0.55092	0.08320	0.55717	8.14%	1.229%	8.23%	6.6967
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	39	37	6.8165	0.51888	0.28905	0.12951	0.31674	4.24%	1.898%	4.64%	2.4456
001.99	Loss on Drying, Miscellaneous (%)	23	22	6.7818	0.50235	0.36790	0.14625	0.39590	5.37%	2.134%	5.78%	2.7071
002.01	Protein, Auto Kjel-Foss (%)	12	12	34.284	0.38234	0.37061	0.13288	0.39372	1.08%	0.388%	1.15%	2.9629
002.05	Protein, Copper, Boric Acid (%)	36	35	34.431	0.44106	0.43757	0.09205	0.44714	1.27%	0.267%	1.30%	4.8574
002.06	Protein, Combustion Nitrogen Analyzer (%)	118	108	34.783	0.44275	0.27179	0.18363	0.32801	0.78%	0.528%	0.94%	1.7863
003.00	Fat, Eth Ext., Direct (%)	12	11	1.7449	0.23533	0.19961	0.05194	0.20626	11.70%	3.044%	12.09%	3.9711
003.06	Fat, Pet Ether (%)	16	16	1.7247	0.21286	0.20740	0.06776	0.21818	12.02%	3.929%	12.65%	3.2201
003.09	Fat, Soxtec, Eth Ext (%)	22	19	1.7672	0.31999	0.25183	0.04991	0.25673	14.77%	2.928%	15.06%	5.1440
003.10	Fat, Soxtec, Pet Ether (%)	26	25	1.4734	0.27908	0.27296	0.10897	0.29391	18.46%	7.371%	19.88%	2.6971
003.14	Fat, Ankom (%)	43	38	1.8130	0.38952	0.25711	0.07239	0.26710	14.83%	4.174%	15.40%	3.6900
004.00	Fiber, Crude, Asbestos Free (%)	15	13	8.7306	1.0750	0.38146	0.09217	0.39244	4.51%	1.089%	4.64%	4.2575
004.06	Fiber, Fibertec (%)	27	23	8.4103	0.56868	0.41920	0.10734	0.43273	4.98%	1.276%	5.14%	4.0314
004.07	Fiber, ANKOM (%)	66	61	9.8123	1.4882	1.4094	0.27960	1.4369	14.51%	2.878%	14.79%	5.1392
005.00	Ash, 2h @ 600°C (%)	90	84	25.729	1.2126	0.84697	0.18336	0.86659	3.27%	0.708%	3.35%	4.7262
005.05	Ash, 3h @ 550°C (%)	34	31	26.275	0.51289	0.35703	0.22147	0.42014	1.36%	0.841%	1.59%	1.8971
005.99	Ash, Miscellaneous (%)	11	11	26.300	0.39753	0.38693	0.12896	0.40785	1.47%	0.490%	1.55%	3.1625
008.02	Fiber, Acid Detergent (%)	17	17	11.403	0.82114	0.78979	0.31786	0.85135	6.93%	2.787%	7.47%	2.6784
008.08	Fiber, Acid Detergent, ANKOM (%)	43	39	11.653	1.2339	1.1040	0.33104	1.1526	9.53%	2.858%	9.95%	3.4817
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	11	10	20.900	1.6035	1.5985	0.17896	1.6085	7.65%	0.856%	7.70%	8.9879
009.09	Fiber, Neutral Detergent, ANKOM (%)	42	39	20.635	1.5447	1.3098	0.49930	1.4017	6.39%	2.437%	6.84%	2.8073
010.99	Moisture, Miscellaneous (%)	15	13	7.3201	1.0165	0.38710	0.07896	0.39507	5.44%	1.110%	5.55%	5.0033
011.01	Loss on Drying, 135°C 2hr (%)	65	60	8.0656	0.48691	0.37759	0.11363	0.39432	4.65%	1.399%	4.85%	3.4702
012.00	Starch, Polarimetric (Ewers) (%)	12	11	5.3679	1.2216	1.2197	0.09718	1.2235	22.72%	1.810%	22.79%	12.590
012.01	Starch, Megazyme (%)	10	10	5.2592	0.97830	0.97314	0.14183	0.98342	18.50%	2.697%	18.70%	6.9336
013.00	Fat, Acid hydrolysis (%)	17	16	2.6904	0.54825	0.54516	0.08227	0.55133	20.26%	3.058%	20.49%	6.7017
013.02	Fat, Mojonnier, Bak Ext (%)	19	16	3.0875	0.49446	0.26546	0.09149	0.28078	8.31%	2.863%	8.79%	3.0690
019.00	Calcium, Ox-Mn04 Vol. (%)	14	11	6.6138	0.57405	0.29830	0.03501	0.30035	4.43%	0.519%	4.46%	8.5795
019.31	Calcium, AAS, Dry ash (%)	26	25	6.8880	0.32016	0.26490	0.08456	0.27807	3.83%	1.221%	4.02%	3.2884
019.41	Calcium, ICP, Dry ash (%)	24	21	6.9814	0.59366	0.34349	0.10520	0.35923	4.97%	1.521%	5.20%	3.4147
019.42	Calcium, ICP, Open vessel (%)	21	20	6.8101	1.3610	0.59393	0.17519	0.61923	8.39%	2.475%	8.75%	3.5346
019.43	Calcium, ICP, Microwave (%)	27	26	6.7251	0.35746	0.33042	0.19287	0.38259	4.91%	2.868%	5.69%	1.9837

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
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	9	9	10.536	1.8915	1.8687	0.41433	1.9141	17.74%	3.932%	18.17%	4.6197
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	17	14	482.65	24.696	18.571	4.8677	19.199	3.81%	1.000%	3.94%	3.9441
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	21	19	471.93	15.403	13.674	10.779	17.412	2.90%	2.286%	3.69%	1.6154
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	21	18	487.30	36.860	26.116	6.8911	27.010	5.40%	1.425%	5.59%	3.9196
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	22	481.93	43.946	35.071	15.383	38.296	7.20%	3.157%	7.86%	2.4895
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	15	13	664.74	180.40	77.560	11.205	78.365	10.98%	1.587%	11.10%	6.9936
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	18	690.59	51.200	39.457	15.481	42.385	5.65%	2.218%	6.07%	2.7379
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	15	14	570.21	164.30	128.37	21.777	130.20	21.47%	3.642%	21.78%	5.9788
025.43	Iron, ICP, Microwave (mg / kg (ppm))	19	17	668.29	131.66	103.58	13.213	104.42	15.05%	1.920%	15.17%	7.9027
027.31	Magnesium, AAS, Dry ash (%)	17	15	0.69340	0.09610	0.04495	0.00723	0.04553	6.31%	1.016%	6.39%	6.2948
027.41	Magnesium, ICP, Dry ash (%)	22	19	0.73976	0.06545	0.02645	0.01116	0.02871	3.65%	1.539%	3.96%	2.5734
027.42	Magnesium, ICP, Open vessel (%)	21	18	0.72805	0.07127	0.03206	0.01271	0.03449	4.36%	1.728%	4.69%	2.7127
027.43	Magnesium, ICP, Microwave (%)	24	21	0.71913	0.04946	0.04178	0.01257	0.04363	5.76%	1.734%	6.02%	3.4698
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	15	12	409.89	96.848	27.034	4.3898	27.388	6.23%	1.012%	6.31%	6.2390
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	20	18	417.04	29.029	29.670	4.6107	30.027	7.11%	1.105%	7.20%	6.5123
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	20	18	427.68	36.562	30.000	10.777	31.877	7.09%	2.548%	7.54%	2.9578
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	23	23	430.54	29.052	28.620	7.0590	29.478	6.65%	1.640%	6.85%	4.1760
031.01	Phosphorus, Photometric (%)	45	38	0.62286	0.04349	0.02975	0.01248	0.03226	4.84%	2.029%	5.25%	2.5860
031.41	Phosphorus, ICP, Dry ash (%)	24	22	0.61812	0.03645	0.03465	0.00777	0.03551	5.63%	1.263%	5.77%	4.5695
031.42	Phosphorus, ICP, Open vessel (%)	22	21	0.60264	0.05432	0.04288	0.02615	0.05022	7.19%	4.385%	8.42%	1.9209
031.43	Phosphorus, ICP, Microwave (%)	26	24	0.59288	0.03955	0.03895	0.01428	0.04148	6.58%	2.412%	7.01%	2.9041
032.31	Potassium, AAS, Dry ash (%)	20	18	2.3307	0.16438	0.15255	0.02984	0.15545	6.50%	1.272%	6.63%	5.2090
032.41	Potassium, ICP, Dry ash (%)	23	21	2.3957	0.12024	0.09833	0.04095	0.10651	4.08%	1.697%	4.41%	2.6009
032.42	Potassium, ICP, Open vessel (%)	20	18	2.4581	0.26142	0.16457	0.04792	0.17140	6.57%	1.913%	6.84%	3.5767
032.43	Potassium, ICP, Microwave (%)	26	23	2.3670	0.14377	0.09941	0.04096	0.10752	4.16%	1.713%	4.50%	2.6251
033.00	Salt as chloride, Sol Cl (%)	19	18	3.8891	0.11674	0.11625	0.01514	0.11723	2.99%	0.389%	3.01%	7.7449
033.01	Salt as chloride, Poten Cl (%)	26	24	4.0081	0.08396	0.06713	0.02699	0.07235	1.68%	0.675%	1.81%	2.6804
033.99	Salt, Miscellaneous (%)	10	9	3.1598	0.90891	0.90588	0.10483	0.91193	28.67%	3.318%	28.86%	8.6993
035.31	Sodium, AAS, Dry ash (%)	16	14	0.80607	0.04601	0.04219	0.01580	0.04505	5.27%	1.972%	5.62%	2.8509
035.41	Sodium, ICP, Dry ash (%)	21	21	0.80492	0.03868	0.03563	0.02128	0.04150	4.43%	2.643%	5.16%	1.9507
035.42	Sodium, ICP, Open vessel (%)	16	14	0.84071	0.07329	0.07406	0.01419	0.07540	8.85%	1.694%	9.01%	5.3156
035.43	Sodium, ICP, Microwave (%)	21	19	0.80209	0.04358	0.04444	0.01438	0.04671	5.53%	1.789%	5.81%	3.2479
036.42	Sulfur, ICP, Open vessel (%)	19	15	0.63437	0.05145	0.02520	0.01290	0.02831	4.08%	2.088%	4.58%	2.1945
036.43	Sulfur, ICP, Microwave (%)	15	13	0.62733	0.05998	0.02680	0.02429	0.03617	4.38%	3.968%	5.91%	1.4889
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	19	17	1,088.3	309.62	65.553	21.383	68.953	5.51%	1.799%	5.80%	3.2247
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	20	19	1,128.3	203.80	71.635	28.536	77.110	6.12%	2.437%	6.59%	2.7022
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	20	18	1,135.7	125.12	94.897	40.685	103.25	8.22%	3.526%	8.95%	2.5378
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	21	1,183.6	96.361	84.333	24.321	87.770	7.19%	2.073%	7.48%	3.6089
106.02	Vitamin A, LC (KU / kg)	20	17	32.655	9.7368	7.1621	2.0939	7.4619	23.11%	6.757%	24.08%	3.5637
109.02	Vitamin E, LC (IU/kg)	16	15	484.58	130.04	41.408	14.148	43.758	8.03%	2.745%	8.49%	3.0928

Test Material Code # 201724

Issue Date : 05/31/2017

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
120.00	Alanine, Post-col Ninhydrin Der (%)	19	16	0.95521	0.03976	0.02727	0.01305	0.03023	2.88%	1.378%	3.19%	2.3161
121.00	Arginine, Post-col Ninhydrin Der (%)	19	18	1.3573	0.03891	0.03743	0.01503	0.04033	2.76%	1.107%	2.97%	2.6836
122.00	Aspartic, Post-col Ninhydrin Der (%)	19	16	1.9170	0.05837	0.04293	0.02192	0.04821	2.25%	1.151%	2.53%	2.1988
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	19	18	0.36968	0.06788	0.02518	0.00650	0.02600	7.09%	1.830%	7.32%	4.0014
125.00	Glutamic, Post-col Ninhydrin Der (%)	19	15	3.6652	0.09869	0.07033	0.03113	0.07691	1.93%	0.856%	2.11%	2.4705
126.00	Glycine, Post-col Ninhydrin Der (%)	19	16	0.96900	0.02942	0.01885	0.00939	0.02106	1.96%	0.974%	2.19%	2.2438
127.00	Histidine, Post-col Ninhydrin Der (%)	18	16	0.53340	0.06951	0.02738	0.00891	0.02879	5.29%	1.720%	5.56%	3.2322
128.00	Isoleucine, Post-col Ninhydrin Der (%)	19	15	0.82104	0.05442	0.02876	0.01271	0.03144	3.50%	1.546%	3.82%	2.4744
129.00	Leucine, Post-col Ninhydrin Der (%)	19	17	1.4550	0.06005	0.03355	0.01951	0.03881	2.32%	1.351%	2.69%	1.9893
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	17	1.0601	0.14125	0.05530	0.01501	0.05730	5.36%	1.454%	5.55%	3.8175
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	18	0.27757	0.04348	0.02268	0.00713	0.02377	8.43%	2.649%	8.84%	3.3356
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	19	16	0.93292	0.03665	0.03651	0.00851	0.03749	3.92%	0.914%	4.03%	4.4044
133.00	Proline, Post-col Ninhydrin Der (%)	19	17	1.1854	0.17599	0.07465	0.02492	0.07870	6.50%	2.171%	6.86%	3.1584
134.00	Serine, Post-col Ninhydrin Der (%)	19	16	0.95544	0.04116	0.02604	0.01584	0.03048	2.71%	1.646%	3.17%	1.9244
135.00	Threonine, Post-col Ninhydrin Der (%)	19	17	0.79359	0.02751	0.02486	0.01512	0.02910	3.14%	1.910%	3.68%	1.9242
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	12	0.64536	0.09020	0.06782	0.01229	0.06893	10.80%	1.957%	10.97%	5.6063
138.00	Valine, Post-col Ninhydrin Der (%)	19	17	1.0277	0.19322	0.06616	0.01597	0.06805	6.72%	1.622%	6.92%	4.2624

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