

Animal Feed Scheme

Swine Feed, Medicated

Test Material Code # 201631

Method Summary Report

(Precision Report Follows)

Methods Reported: 324

Labs Reporting: 201

Issue Date : 12/31/2016

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 (%)	1	1	0.20000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	9	8	6.4963	1.0572	6.6268	0.87213	0.38543	13.16%	0.05426	3.01%
001.03	Loss on Drying, Low temp. methods (%)	2	2	7.0425	0.19445						
001.05	Loss on Drying, LECO (%)	1	1	6.9050							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	39	37	7.1533	0.46378	7.1058	0.37535	0.07713	5.28%	0.11919	2.98%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	2	2	7.2875	0.30052						
001.99	Loss on Drying, Miscellaneous (%)	19	19	6.8318	0.71621	6.8424	0.77383	0.22191	11.31%	0.11784	2.99%
002.00	Protein, Crude (%)	3	3	20.570	0.47820	20.570	0.47820	0.27609	2.32%	0.10667	2.20%
002.01	Protein, Auto Kjel-Foss (%)	15	15	20.475	0.26752	20.476	0.30148	0.09730	1.47%	0.07106	2.21%
002.02	Protein, Semiauto Autoanalyzer (%)	3	3	20.585	0.07362	20.585	0.07362	0.04250	0.36%	0.12797	2.20%
002.04	Protein, Copper Catalyst (%)	6	6	21.168	2.0899	20.716	1.0131	0.51701	4.89%	0.14667	2.20%
002.05	Protein, Copper, Boric Acid (%)	28	27	20.433	0.31989	20.456	0.29932	0.07200	1.46%	0.14003	2.21%
002.06	Protein, Combustion Nitrogen Analyzer (%)	133	128	20.790	0.34282	20.779	0.24421	0.02698	1.18%	0.14862	2.19%
002.08	Protein, Cu/Ti (%)	4	4	20.379	0.58420	20.379	0.58420	0.29210	2.87%	0.16308	2.22%
002.10	Protein, Block dig/distillation (%)	1	1	21.170							
002.11	Protein, NIR (%)	9	9	22.237	1.9654	22.158	2.0480	0.85334	9.24%	0.12111	2.12%
002.99	Protein, Miscellaneous (%)	5	5	21.706	2.3006	20.699	0.54219	0.27110	2.62%	0.11460	2.20%
003.00	Fat, Eth Ext., Direct (%)	14	14	5.5462	0.38486	5.5462	0.43643	0.14580	7.87%	0.12079	3.09%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	1	1	6.3700							
003.06	Fat, Pet Ether (%)	17	16	5.5498	0.42488	5.6206	0.24199	0.07562	4.31%	0.09173	3.08%
003.09	Fat, Soxtec, Eth Ext (%)	18	17	5.6846	0.31129	5.7085	0.30178	0.09149	5.29%	0.09779	3.08%
003.10	Fat, Soxtec, Pet Ether (%)	30	29	5.6075	0.33528	5.6187	0.25572	0.05936	4.55%	0.13464	3.08%
003.11	Fat, NIR (%)	10	10	5.4410	0.49113	5.4756	0.45128	0.17839	8.24%	0.02600	3.10%
003.12	Fat, Hexane Ext (%)	4	4	5.3088	0.46816	5.3088	0.46816	0.23408	8.82%	0.17250	3.11%
003.13	Fat, Soxtec, Hexane Ext. (%)	10	10	5.6349	0.39806	5.6291	0.43868	0.17340	7.79%	0.28515	3.08%
003.14	Fat, Ankom (%)	40	40	4.8590	0.45931	4.8467	0.41321	0.08167	8.53%	0.16908	3.15%
003.99	Fat, Miscellaneous (%)	9	9	6.2733	1.4923	5.9657	0.66831	0.27846	11.20%	0.12222	3.06%
004.00	Fiber, Crude, Asbestos Free (%)	17	16	2.6506	0.34136	2.6272	0.32922	0.10288	12.53%	0.18274	3.46%
004.01	Fiber, Sing Filt (%)	1	1	3.1000							
004.03	Fiber, Fritted Glass (%)	6	6	2.3783	0.88330	2.3783	1.0017	0.51116	42.12%	0.09667	3.51%

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
004.06	Fiber, Fibertec (%)	23	23	2.7662	0.75449	2.6449	0.45513	0.11863	17.21%	0.11053	3.46%
004.07	Fiber, ANKOM (%)	64	63	2.4159	0.46873	2.4017	0.45328	0.07138	18.87%	0.14462	3.51%
004.11	Fiber, NIR (%)	8	8	2.6169	0.65713	2.5490	0.57847	0.25565	22.69%	0.05375	3.47%
004.99	Fiber, Miscellaneous (%)	4	4	2.3225	0.45259	2.3225	0.45259	0.22630	19.49%	0.18700	3.52%
005.00	Ash, 2h @ 600°C (%)	102	100	6.4616	0.21743	6.4549	0.15320	0.01915	2.37%	0.06740	3.02%
005.02	Ash, LECO (%)	1	1	6.5400							
005.05	Ash, 3h @ 550°C (%)	25	24	6.5924	0.15686	6.6099	0.11649	0.02972	1.76%	0.04931	3.01%
005.11	Ash, NIR (%)	8	8	8.1375	2.4890	8.1375	2.8225	1.2474	34.68%	0.15250	2.92%
005.99	Ash, Miscellaneous (%)	15	15	6.5220	0.15314	6.5223	0.16400	0.05293	2.51%	0.07867	3.02%
006.00	Total sugars, As sucrose (%)	1	1	6.2650							
006.01	Total sugars, Mod. Fehling Soln (%)	1	1	8.9050							
006.99	Total sugars, Miscellaneous (%)	3	3	5.8967	3.1957	5.8967	3.1957	1.8451	54.20%	0.27333	3.06%
008.02	Fiber, Acid Detergent (%)	16	16	3.6130	0.91388	3.6192	0.74799	0.23375	20.67%	0.26693	3.30%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	4.2000							
008.08	Fiber, Acid Detergent, ANKOM (%)	43	42	3.7685	1.1025	3.6393	0.84729	0.16342	23.28%	0.25674	3.29%
008.99	Fiber, Acid Detergent Miscellaneous (%)	4	4	4.5113	2.1971	3.4183	0.27250	0.15733	7.97%	0.16750	3.32%
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	13.135							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	10	9	8.3388	1.4946	8.3388	1.6949	0.70619	20.33%	0.24486	2.91%
009.09	Fiber, Neutral Detergent, ANKOM (%)	37	36	8.7393	2.3957	8.4802	1.8812	0.39193	22.18%	0.25158	2.90%
009.99	Fiber, Neutral Det Miscellaneous (%)	5	5	7.4650	1.7437	7.4650	1.7437	0.77979	23.36%	0.53800	2.96%
010.03	Moisture, Karl-Fischer (%)	3	3	7.5433	0.21704	7.5433	0.21704	0.12531	2.88%	0.04000	2.95%
010.11	Moisture, NIR (%)	6	6	7.6467	1.0476	7.5226	0.88549	0.45188	11.77%	0.02667	2.95%
010.99	Moisture, Miscellaneous (%)	19	18	7.1931	0.85190	7.2863	0.63371	0.18671	8.70%	0.19722	2.97%
011.01	Loss on Drying, 135°C 2hr (%)	74	72	7.8670	0.61950	7.9287	0.39028	0.05749	4.92%	0.11305	2.93%
011.02	Loss on Drying, 130°C for 2 hours (%)	2	2	7.8375	0.21567						
011.03	Loss on drying, 130°C, 1 hour, Flour (%)	1	1	5.3050							
011.99	Loss on Drying, High Temp. Methods Miscellaneous	4	4	7.8475	0.22115	7.8475	0.22115	0.11058	2.82%	0.11000	2.93%
012.00	Starch, Polarimetric (Ewers) (%)	9	9	38.294	1.7729	38.659	0.97643	0.40685	2.53%	0.34222	1.61%
012.01	Starch, Megazyme (%)	9	9	29.585	9.9128	32.271	4.6476	1.9365	14.40%	0.79438	1.76%
012.02	Starch, Colorimetric (GOP) (%)	2	2	39.565	1.4354						
012.03	Starch, Enzymatic (%)	5	5	35.435	1.5060	35.435	1.5060	0.67352	4.25%	0.55494	1.68%
012.04	Starch, YSI Analyzer (%)	5	5	34.796	1.6108	34.796	1.6108	0.72037	4.63%	0.55600	1.70%
012.11	Starch, NIR (%)	4	4	34.764	4.4337	34.764	4.4337	2.2169	12.75%	0.20750	1.70%
013.00	Fat, Acid hydrolysis (%)	21	21	6.5269	0.53491	6.5269	0.60312	0.16451	9.24%	0.13211	3.02%
013.02	Fat, Mojonier, Bak Ext (%)	21	21	6.8265	0.64865	6.9131	0.50899	0.13884	7.36%	0.19094	2.99%
013.10	Fat, Soxtec-Acid Hydrolysis (%)	5	5	6.4233	0.56484	6.4233	0.56484	0.25261	8.79%	0.15116	3.02%
013.13	Fat, Ankom- Acid Hydrolysis (%)	4	4	6.6029	0.36650	6.6029	0.36650	0.18325	5.55%	0.15325	3.01%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	3	3	737.50	73.129	737.50	73.129	42.221	9.92%	6.3367	5.92%

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
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	631.45							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	5	5	561.56	191.39	561.56	191.39	85.591	34.08%	6.4284	6.17%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	459.56							
015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	2	2	710.76	204.70						
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	4	16.671	1.2253	16.671	1.2253	0.61264	7.35%	0.45250	10.47%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	4	4	15.846	1.4824	15.846	1.4824	0.74118	9.35%	0.95750	10.55%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	4	4	11.494	6.8563	11.667	8.3865	4.8419	71.88%	0.06250	11.05%
017.52	Boron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	15.035							
017.53	Boron, ICP-MS, Microwave (mg / kg (ppm))	1	1	17.017							
019.00	Calcium, Ox-Mn04 Vol. (%)	13	13	1.0240	0.16259	1.0478	0.11458	0.03972	10.94%	0.03048	3.97%
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	1.1268							
019.08	Calcium, EDTA (%)	8	8	1.0831	0.09568	1.0650	0.06000	0.02651	5.63%	0.00783	3.96%
019.09	Calcium, Ion-selective electrode (%)	1	1	1.0200							
019.31	Calcium, AAS, Dry ash (%)	24	23	1.0305	0.06175	1.0308	0.04010	0.01045	3.89%	0.02881	3.98%
019.32	Calcium, AAS, Open vessel (%)	4	4	1.0945	0.06543	1.0945	0.06543	0.03271	5.98%	0.03400	3.95%
019.33	Calcium, AAS, Microwave (%)	2	2	1.1023	0.01803						
019.41	Calcium, ICP, Dry ash (%)	33	32	1.0464	0.04251	1.0469	0.04317	0.00954	4.12%	0.01742	3.97%
019.42	Calcium, ICP, Open vessel (%)	23	22	1.0368	0.07786	1.0343	0.08156	0.02174	7.89%	0.02906	3.98%
019.43	Calcium, ICP, Microwave (%)	22	22	1.0639	0.10661	1.0473	0.05608	0.01495	5.35%	0.03155	3.97%
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	1.0172	0.01941	1.0172	0.01941	0.01120	1.91%	0.02040	3.99%
019.53	Calcium, ICP-MS, Microwave (%)	3	3	1.0523	0.05541	1.0523	0.05541	0.03199	5.27%	0.03100	3.97%
019.99	Calcium, Miscellaneous (%)	6	6	1.0450	0.06261	1.0450	0.07100	0.03623	6.79%	0.06667	3.97%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	2	2	2.7825	0.39952						
021.32	Cobalt, AAS, Open vessel (mg / kg (ppm))	1	1	2.1000							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	2	2	1.8925	0.50558						
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	2	2	1.8625	0.40659						
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	7	7	2.3298	0.39904	2.3298	0.45252	0.21379	19.42%	0.21283	14.08%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	2	2	1.4530	0.30123						
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	4	4	2.6365	1.3627	2.6365	1.3627	0.68135	51.69%	0.22305	13.82%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	13	12	306.43	21.494	306.44	20.196	7.2877	6.59%	5.7798	6.76%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	3	3	344.42	13.450	344.42	13.450	7.7652	3.91%	18.167	6.64%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	3	3	317.95	20.544	317.95	20.544	11.861	6.46%	5.1570	6.72%
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	22	21	300.79	25.106	300.92	28.198	7.6917	9.37%	9.6480	6.78%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	21	20	338.64	37.687	332.35	20.095	5.6166	6.05%	12.910	6.68%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	19	18	334.21	21.941	331.51	17.602	5.1861	5.31%	8.3116	6.68%
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	1	1	360.86							
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	4	4	311.68	17.449	311.68	17.449	8.7244	5.60%	14.733	6.74%
022.99	Copper, Miscellaneous (mg / kg (ppm))	3	3	322.00	19.157	322.00	19.157	11.060	5.95%	14.000	6.71%

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
023.01	Fluorine, Ion Sel Elect (mg / kg (ppm))	1	1	24.750							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	13	12	531.20	56.252	523.68	42.884	15.475	8.19%	8.9758	6.23%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	2	2	529.43	0.10607						
025.33	Iron, AAS, Microwave (mg / kg (ppm))	1	1	515.65							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	23	21	504.93	35.256	507.31	34.744	9.4773	6.85%	11.763	6.26%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	16	16	370.79	105.83	384.90	85.485	26.714	22.21%	12.281	6.53%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	17	17	457.22	90.084	464.96	80.983	24.552	17.42%	13.185	6.35%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	2	2	443.41	30.929						
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	2	2	467.21	97.287						
025.99	Iron, Miscellaneous (mg / kg (ppm))	2	2	401.25	14.496						
027.31	Magnesium, AAS, Dry ash (%)	14	14	0.18243	0.01060	0.18137	0.00914	0.00305	5.04%	0.00481	5.17%
027.32	Magnesium, AAS, Open vessel (%)	3	3	0.17200	0.01253	0.17200	0.01253	0.00723	7.28%	0.00667	5.21%
027.33	Magnesium, AAS, Microwave (%)	3	3	0.16767	0.01570	0.16500	0.02121	0.01500	12.86%	0.00200	5.25%
027.41	Magnesium, ICP, Dry ash (%)	25	24	0.18084	0.00682	0.18035	0.00642	0.00164	3.56%	0.00381	5.18%
027.42	Magnesium, ICP, Open vessel (%)	21	21	0.16967	0.02677	0.17410	0.01351	0.00368	7.76%	0.00580	5.20%
027.43	Magnesium, ICP, Microwave (%)	18	18	0.18451	0.02785	0.18009	0.00934	0.00275	5.19%	0.00502	5.18%
027.52	Magnesium, ICP-MS, Open vessel (%)	2	2	0.17743	0.00117						
027.53	Magnesium, ICP-MS, Microwave (%)	4	4	378.14	755.91	0.18515	0.01618	0.00934	8.74%	37.006	5.16%
027.99	Magnesium, Miscellaneous (%)	4	4	0.18375	0.01974	0.18667	0.02309	0.01333	12.37%	0.00250	5.15%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	12	12	59.966	3.9828	59.990	4.4643	1.6109	7.44%	2.0880	8.64%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	3	3	61.225	3.1507	61.225	3.1507	1.8191	5.15%	0.10333	8.61%
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	2	2	55.319	2.4979						
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	24	22	59.546	3.1479	59.775	2.3943	0.63808	4.01%	1.2025	8.64%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	20	19	61.212	7.4331	60.766	7.2928	2.0914	12.00%	2.1993	8.62%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	17	16	60.285	3.7412	59.949	3.4108	1.0659	5.69%	1.4408	8.64%
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	1	1	66.405							
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	4	4	60.307	4.5292	60.307	4.5292	2.2646	7.51%	3.1894	8.63%
028.99	Manganese, Miscellaneous (mg / kg (ppm))	4	4	61.750	2.7234	61.750	2.7234	1.3617	4.41%	1.5000	8.60%
031.01	Phosphorus, Photometric (%)	43	42	0.69215	0.04163	0.69044	0.02998	0.00578	4.34%	0.01118	4.23%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	3	3	0.68833	0.04193	0.67500	0.04950	0.03500	7.33%	0.00333	4.24%
031.03	Phosphorus, Autoanalyzer (%)	5	5	0.67891	0.02410	0.67891	0.02410	0.01078	3.55%	0.00482	4.24%
031.06	Phosphorus, Hach Method (%)	1	1	0.69400							
031.41	Phosphorus, ICP, Dry ash (%)	32	31	0.67174	0.10923	0.68789	0.03174	0.00713	4.61%	0.01001	4.23%
031.42	Phosphorus, ICP, Open vessel (%)	23	23	0.67788	0.04821	0.67781	0.05225	0.01362	7.71%	0.02732	4.24%
031.43	Phosphorus, ICP, Microwave (%)	21	20	0.68702	0.03062	0.68749	0.03132	0.00875	4.56%	0.01095	4.23%
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.62820							
031.53	Phosphorus, ICP-MS, Microwave (%)	3	3	0.69910	0.03741	0.69910	0.03741	0.02160	5.35%	0.00920	4.22%
031.99	Phosphorus, Miscellaneous (%)	5	5	0.66650	0.05055	0.68875	0.01031	0.00515	1.50%	0.01420	4.23%

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
032.02	Potassium, Flame Emission (%)	2	2	1.0350	0.01414						
032.31	Potassium, AAS, Dry ash (%)	15	15	0.99481	0.06153	0.99555	0.06443	0.02080	6.47%	0.02347	4.00%
032.32	Potassium, AAS, Open vessel (%)	2	2	0.92250	0.10253						
032.41	Potassium, ICP, Dry ash (%)	25	24	0.98066	0.05199	0.98489	0.03776	0.00964	3.83%	0.01989	4.01%
032.42	Potassium, ICP, Open vessel (%)	22	22	1.0235	0.06916	1.0229	0.05705	0.01520	5.58%	0.02658	3.99%
032.43	Potassium, ICP, Microwave (%)	17	17	1.0035	0.08570	0.99433	0.07037	0.02133	7.08%	0.01515	4.00%
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	1.0027	0.01001						
032.53	Potassium, ICP-MS, Microwave (%)	3	3	1.0116	0.00918	1.0116	0.00918	0.00530	0.91%	0.03117	3.99%
032.99	Potassium, Miscellaneous (%)	5	5	1.0340	0.04068	1.0340	0.04068	0.01819	3.93%	0.02800	3.98%
033.00	Salt as chloride, Sol Cl (%)	20	20	0.34094	0.05544	0.33909	0.04699	0.01313	13.86%	0.01622	4.71%
033.01	Salt as chloride, Poten Cl (%)	29	29	0.38180	0.02318	0.38067	0.02062	0.00479	5.42%	0.01008	4.63%
033.03	Salt as chloride, Quantab (%)	5	5	0.35100	0.04827	0.33875	0.04589	0.02295	13.55%	0.02200	4.71%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	0.44833	0.11623	0.44833	0.11623	0.06710	25.92%	0.02333	4.51%
033.99	Salt, Miscellaneous (%)	9	9	0.40972	0.20595	0.35393	0.04304	0.01793	12.16%	0.01633	4.68%
034.01	Selenium, Fluor (mg / kg (ppm))	2	2	0.43750	0.01061						
034.04	Selenium, AA, Hydride (mg / kg (ppm))	5	5	0.47800	0.06695	0.47800	0.06695	0.02994	14.01%	0.02400	17.88%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	2	2	0.63640	0.31410						
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1	1	1.0700							
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	5	5	0.55680	0.17271	0.55680	0.17271	0.07724	31.02%	0.04640	17.47%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	5	5	0.89334	0.59714	0.63459	0.17056	0.08528	26.88%	0.09240	17.13%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	2	2	1.5925	1.6087						
035.01	Sodium, Ion-selective electrode (%)	3	3	0.12133	0.00629	0.12133	0.00629	0.00363	5.19%	0.00267	5.49%
035.02	Sodium, Em Spect (%)	1	1	0.11000							
035.05	Sodium, Flame Emission (%)	4	4	0.11700	0.00582	0.11700	0.00582	0.00291	4.97%	0.00400	5.52%
035.31	Sodium, AAS, Dry ash (%)	17	17	0.10740	0.01542	0.10514	0.01093	0.00331	10.40%	0.00523	5.61%
035.32	Sodium, AAS, Open vessel (%)	2	2	0.12175	0.02581						
035.41	Sodium, ICP, Dry ash (%)	26	25	0.13362	0.11700	0.10932	0.01261	0.00315	11.53%	0.00412	5.58%
035.42	Sodium, ICP, Open vessel (%)	20	20	0.10569	0.00907	0.10533	0.00915	0.00256	8.68%	0.00523	5.61%
035.43	Sodium, ICP, Microwave (%)	16	15	0.10276	0.00964	0.10222	0.00944	0.00305	9.23%	0.00535	5.64%
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.10505	0.01209						
035.53	Sodium, ICP-MS, Microwave (%)	3	3	0.10580	0.00279	0.10580	0.00279	0.00161	2.63%	0.00473	5.61%
035.99	Sodium, Miscellaneous (%)	7	6	0.10817	0.00601	0.10817	0.00682	0.00348	6.30%	0.01033	5.59%
036.00	Sulfur, Gravimetric (%)	1	1	0.28350							
036.04	Sulfur, LECO (%)	4	4	0.29875	0.01315	0.30333	0.01155	0.00667	3.81%	0.00250	4.79%
036.42	Sulfur, ICP, Open vessel (%)	22	22	0.29628	0.02678	0.29943	0.01980	0.00528	6.61%	0.01085	4.80%
036.43	Sulfur, ICP, Microwave (%)	11	10	0.30321	0.01705	0.30397	0.01758	0.00695	5.78%	0.00728	4.78%
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	2,853.5							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.30900							

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
036.99	Sulfur, Miscellaneous (%)	2	2	0.30500	0.00707						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	16	15	1,243.6	60.063	1,242.5	48.266	15.578	3.88%	19.909	5.47%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	3	3	809.00	632.24	809.00	632.24	365.02	78.15%	32.000	5.84%
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	2	2	1,236.8	4.5962						
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	26	24	1,267.9	41.524	1,267.2	34.623	8.8343	2.73%	27.874	5.46%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	20	19	1,244.8	89.346	1,251.4	83.471	23.937	6.67%	27.526	5.47%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	21	20	1,248.6	263.69	1,279.6	102.56	28.668	8.02%	21.094	5.45%
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	2	2	702.43	483.05						
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	4	4	1,163.2	161.90	1,163.2	161.90	80.952	13.92%	55.172	5.53%
037.99	Zinc, Miscellaneous (mg / kg (ppm))	4	4	1,293.4	97.186	1,293.4	97.186	48.593	7.51%	17.750	5.44%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	3	3	1.2182	0.06727	1.2182	0.06727	0.03884	5.52%	0.05633	15.53%
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	3	3	1.1883	0.41780	0.97500	0.27577	0.19500	28.28%	0.00333	16.06%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	8	7	1.3507	0.25043	1.3160	0.18548	0.08763	14.09%	0.09857	15.35%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	1.1250							
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	4	4	1.8461	1.3631	1.8461	1.3631	0.68155	73.84%	0.10690	14.59%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	14.750							
040.52	Barium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	8.5600							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	9.9556							
041.52	Vanadium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	1.8445							
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	1	1	1.7250							
042.00	Chloride, Titrimetric (%)	2	2	0.21500	0.00707						
042.99	Chloride, Miscellaneous (%)	1	1	0.21000							
050.01	Carbadox, LC (mg / kg (ppm))	2	2	10.607	8.8921						
051.00	Chlortetracycline, Plate (mg / kg (ppm))	6	6	38.755	5.9668	38.755	6.7663	3.4529	17.46%	2.8614	9.23%
051.03	Chlortetracycline, LC (mg / kg (ppm))	13	13	42.834	13.411	40.640	9.7835	3.3918	24.07%	3.7285	9.16%
051.99	Chlortetracycline, Miscellaneous (mg / kg (ppm))	1	1	69.000							
057.01	Ethoxyquin, LC (mg / kg (ppm))	1	1	2.0000							
077.01	Pyrantel Tartrate, LC (mg / kg (ppm))	1		4.7650							
082.00	Sulfamethazine, Spectrophotometer (mg / kg (ppm))	2	2	53.405	5.3811						
082.01	Sulfamethazine, LC (mg / kg (ppm))	7	7	59.320	34.730	59.320	39.384	18.607	66.39%	2.6235	8.65%
086.00	Tiamulin, LC (mg / kg (ppm))	1		0.00000							
101.00	Choline Chloride, Microbiological (mg / kg (ppm))	1	1	1,725.0							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	32.850							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	9.6850							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	4.3850	0.94045						
104.03	Riboflavin, LC (mg / kg (ppm))	1	1	1.6950							
105.00	Thiamine, LC (mg / kg (ppm))	1	1	2.6550							
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	4.3900							

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
106.01	Vitamin A, UV (KU / kg)	1	1	0.71500							
106.02	Vitamin A, LC (KU / kg)	9	7	28.649	55.575	12.979	19.554	9.2382	150.65%	4.4757	
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	11.800							
108.01	Vitamin D3, LC, AOAC (KU / kg)	1		0.00000							
108.02	Vitamin D3, LC (KU / kg)	1	1	5.7600							
108.99	Vitamin D3, Miscellaneous (KU / kg)	1	1	0.22450							
109.02	Vitamin E, LC (IU/kg)	13	12	13.076	8.8925	11.430	4.2577	1.5364	37.25%	1.1222	
112.01	Pyridoxine, LC (µg / g)	1	1	3.8600							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.1300							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.25000							
120.00	Alanine, Post-col Ninhydrin Der (%)	18	18	1.0306	0.04736	1.0338	0.03221	0.00949	3.12%	0.01093	3.98%
120.02	Alanine, Post-col OPA Der (%)	1	1	1.0575							
120.05	Alanine, Pre-col AQC Der (%)	3	3	0.99983	0.01397	0.99983	0.01397	0.00806	1.40%	0.01233	4.00%
121.00	Arginine, Post-col Ninhydrin Der (%)	18	18	1.3079	0.06800	1.3167	0.05619	0.01655	4.27%	0.01778	3.84%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.3495							
121.05	Arginine, Pre-col AQC Der (%)	3	3	1.3463	0.04272	1.3463	0.04272	0.02467	3.17%	0.03000	3.82%
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	18	2.0742	0.08987	2.0917	0.04561	0.01344	2.18%	0.02677	3.58%
122.02	Aspartic, Post-col OPA Der (%)	1	1	2.1395							
122.05	Aspartic, Pre-col AQC Der (%)	3	3	2.0673	0.06745	2.0673	0.06745	0.03894	3.26%	0.02200	3.59%
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	18	18	0.31612	0.02793	0.31480	0.02289	0.00674	7.27%	0.01179	4.76%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.33150							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	3	3	0.33960	0.02161	0.33960	0.02161	0.01248	6.36%	0.00533	4.71%
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	18	3.5781	0.08544	3.5854	0.07075	0.02084	1.97%	0.03849	3.30%
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.5370							
125.05	Glutamic, Pre-col AQC Der (%)	3	3	3.5505	0.11266	3.5505	0.11266	0.06505	3.17%	0.06367	3.31%
126.00	Glycine, Post-col Ninhydrin Der (%)	18	18	0.92044	0.03768	0.92838	0.02333	0.00687	2.51%	0.01033	4.04%
126.02	Glycine, Post-col OPA Der (%)	1	1	0.95000							
126.05	Glycine, Pre-col AQC Der (%)	3	3	0.92167	0.04654	0.92167	0.04654	0.02687	5.05%	0.01133	4.05%
127.00	Histidine, Post-col Ninhydrin Der (%)	18	17	0.52739	0.02250	0.52878	0.02109	0.00639	3.99%	0.00752	4.40%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.53200							
127.05	Histidine, Pre-col AQC Der (%)	3	3	0.55317	0.04991	0.55317	0.04991	0.02881	9.02%	0.01300	4.37%
128.00	Isoleucine, Post-col Ninhydrin Der (%)	18	18	0.85121	0.06128	0.85879	0.04796	0.01413	5.58%	0.01458	4.09%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.89750							
128.05	Isoleucine, Pre-col AQC Der (%)	3	3	0.88550	0.03368	0.88550	0.03368	0.01944	3.80%	0.02100	4.07%
129.00	Leucine, Post-col Ninhydrin Der (%)	18	18	1.6493	0.06786	1.6600	0.04719	0.01390	2.84%	0.01729	3.71%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.7125							
129.05	Leucine, Pre-col AQC Der (%)	3	3	1.6788	0.05789	1.6788	0.05789	0.03342	3.45%	0.02300	3.70%
130.00	L-Lysine, Post-col Ninhydrin Der (%)	20	20	1.2748	0.10854	1.2830	0.04204	0.01175	3.28%	0.01546	3.85%

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
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.3490							
130.05	L-Lysine, Pre-col AQC Der (%)	6	6	1.3022	0.05122	1.3022	0.05809	0.02964	4.46%	0.02933	3.84%
130.99	L-Lysine, Miscellaneous (%)	1	1	1.0650							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	18	17	0.33377	0.03920	0.34331	0.01543	0.00468	4.49%	0.00576	4.70%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.32800							
131.05	Methionine, PAO Pre-col AQC Der (%)	4	4	4.6814	8.6658	0.34847	0.02947	0.01702	8.46%	8.6665	4.69%
131.99	Methionine, Miscellaneous (%)	1	1	0.28250							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	18	0.97364	0.03738	0.97781	0.02916	0.00859	2.98%	0.01564	4.01%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.98350							
132.05	Phenylalanine, Pre-col AQC Der (%)	3	3	0.98800	0.04543	0.98800	0.04543	0.02623	4.60%	0.02533	4.01%
133.00	Proline, Post-col Ninhydrin Der (%)	18	18	1.1541	0.03302	1.1514	0.03007	0.00886	2.61%	0.01843	3.92%
133.05	Proline, Pre-col AQC Der (%)	3	3	1.1430	0.06762	1.1430	0.06762	0.03904	5.92%	0.01600	3.92%
134.00	Serine, Post-col Ninhydrin Der (%)	18	17	0.98656	0.04205	0.99069	0.03391	0.01028	3.42%	0.01011	4.01%
134.02	Serine, Post-col OPA Der (%)	1	1	0.90550							
134.05	Serine, Pre-col AQC Der (%)	3	3	0.93933	0.05953	0.93933	0.05953	0.03437	6.34%	0.04067	4.04%
135.00	Threonine, Post-col Ninhydrin Der (%)	18	18	0.79017	0.03599	0.79588	0.02600	0.00766	3.27%	0.00992	4.14%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.79100							
135.05	Threonine, Pre-col AQC Der (%)	3	3	0.78700	0.03555	0.78700	0.03555	0.02053	4.52%	0.02067	4.15%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	4	4	0.25171	0.02811	0.25171	0.02811	0.01406	11.17%	0.02398	4.92%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	3	3	0.25000	0.01491	0.25000	0.01491	0.00861	5.96%	0.00133	4.93%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.24700							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	3	3	0.24900	0.00500	0.24900	0.00500	0.00289	2.01%	0.00133	4.93%
136.99	Tryptophan, Miscellaneous (%)	2	2	0.26000	0.00707						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	12	0.62580	0.10645	0.63496	0.09755	0.03520	15.36%	0.01084	4.28%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.71650							
137.05	Tyrosine, Pre-col AQC Der (%)	3	3	0.71333	0.07846	0.71333	0.07846	0.04530	11.00%	0.02333	4.21%
138.00	Valine, Post-col Ninhydrin Der (%)	18	18	0.95013	0.05876	0.95495	0.05339	0.01573	5.59%	0.01284	4.03%
138.02	Valine, Post-col OPA Der (%)	1	1	0.96550							
138.05	Valine, Pre-col AQC Der (%)	3	3	0.97500	0.02140	0.97500	0.02140	0.01235	2.19%	0.02400	4.01%
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.19250	0.00354						
139.02	Taurine, Post-col OPA Der (%)	1		0.00000							
160.99	Fructose, Miscellaneous (%)	4	4	0.29675	0.17415	0.29675	0.17415	0.08708	58.69%	0.04900	4.80%
162.99	Glucose, Miscellaneous (%)	6	5	1.6082	2.9233	0.30525	0.27653	0.15459	90.59%	0.04760	4.78%
163.99	Lactose, Miscellaneous (%)	6	6	3.7528	1.0786	3.7528	1.2231	0.62415	32.59%	0.08835	3.28%
164.99	Maltose, Miscellaneous (%)	3	1								
165.99	Sucrose, Miscellaneous (%)	6	5	4.2451	1.1099	3.6778	0.35329	0.19749	9.61%	0.01200	3.29%
166.99	Raffinose, Miscellaneous (%)	3	3	0.74733	0.17232	0.66725	0.14460	0.10225	21.67%	0.05667	4.25%
167.99	Stachyose, Miscellaneous (%)	3	3	1.4303	0.18592	1.3230	0.00283	0.00200	0.21%	0.03067	3.83%

Test Material Code # 201631

Issue Date : 12/31/2016

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
350.02	Carbadox, residual, LC-MS (µg / kg (ppb))	1	1	240.00							
386.01	Tiamulin, residual, LC-MS (µg / kg (ppb))	1	1	1,430.0							
393.01	Ractopamine Hydrochloride, residual, LC-MS (µg / kg (ppb))	1	1	388.00							
393.02	Ractopamine Hydrochloride, residual, LC-MS/MS	2	2	314.46	321.79						
400.01	Water activity, Aqualab chilled mirror (Units)	5	5	0.36204	0.08002	0.36204	0.08002	0.03578	22.10%	0.00624	
400.99	Water activity, Miscellaneous (Units)	3	3	0.36400	0.05401	0.33450	0.02475	0.01750	7.40%	0.00347	
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	1	1	0.35000							
516.43	Arsenic, total, ICP, Microwave (mg / kg (ppm))	1	1	0.83030							
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.40900	0.05515						
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm))	5	5	0.36433	0.16024	0.36433	0.16024	0.07166	43.98%	0.03186	18.62%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	2	2	0.08775	0.01732						
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	1	1	0.10325							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.08400	0.00566						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.08363	0.00426	0.08363	0.00483	0.00247	5.78%	0.00553	22.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	4.4600	2.2486						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	1	1	7.2800							
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	2	2	8.3364	0.20701						
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	4.7735							
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	2	2	4.8227	3.1498						
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2	2	0.31750	0.06010						
526.43	Lead, ICP, Microwave (mg / kg (ppm))	1	1	0.64070							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.66450	0.10677						
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	5	5	0.46912	0.17628	0.54735	0.02513	0.01257	4.59%	0.02136	17.52%
529.99	Mercury, Miscellaneous (µg / kg (ppb))	1	1	0.00000							
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	1	1	3.9500							
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	1	1	4.8383							
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	1	1	3.3400							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	1	1	2.3667							

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
Swine Feed, Medicated
Test Material Code # 201631

Method Precision Report

Methods Reported: 92
Labs Reporting: 201
Issue Date : 12/31/2016

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 (%)	39	34	7.1212	0.36421	0.35748	0.09853	0.37081	5.02%	1.384%	5.21%	3.7633
001.99	Loss on Drying, Miscellaneous (%)	19	19	6.8318	0.71621	0.71227	0.10615	0.72013	10.43%	1.554%	10.54%	6.7842
002.01	Protein, Auto Kjel-Foss (%)	15	15	20.475	0.26752	0.26341	0.06601	0.27156	1.29%	0.322%	1.33%	4.1137
002.05	Protein, Copper, Boric Acid (%)	28	24	20.506	0.23558	0.22220	0.11069	0.24824	1.08%	0.540%	1.21%	2.2427
002.06	Protein, Combustion Nitrogen Analyzer (%)	133	118	20.784	0.24910	0.23535	0.11542	0.26213	1.13%	0.555%	1.26%	2.2711
002.11	Protein, NIR (%)	9	9	22.237	1.9654	1.9640	0.10271	1.9667	8.83%	0.462%	8.84%	19.147
003.00	Fat, Eth Ext., Direct (%)	14	13	5.5790	0.37968	0.37503	0.08375	0.38427	6.72%	1.501%	6.89%	4.5885
003.06	Fat, Pet Ether (%)	17	14	5.6251	0.18839	0.18121	0.07284	0.19530	3.22%	1.295%	3.47%	2.6814
003.09	Fat, Soxtec, Eth Ext (%)	18	16	5.6949	0.31850	0.31497	0.06683	0.32198	5.53%	1.173%	5.65%	4.8181
003.10	Fat, Soxtec, Pet Ether (%)	30	27	5.6089	0.23113	0.21687	0.11301	0.24455	3.87%	2.015%	4.36%	2.1640
003.11	Fat, NIR (%)	10	9	5.4289	0.51933	0.51917	0.01856	0.51950	9.56%	0.342%	9.57%	27.991
003.13	Fat, Soxtec, Hexane Ext. (%)	10	10	5.6349	0.39806	0.33773	0.29795	0.45037	5.99%	5.288%	7.99%	1.5116
003.14	Fat, Ankom (%)	40	37	4.8223	0.41757	0.40701	0.13196	0.42787	8.44%	2.736%	8.87%	3.2424
003.99	Fat, Miscellaneous (%)	9	8	5.8075	0.55953	0.55159	0.13285	0.56737	9.50%	2.288%	9.77%	4.2706
004.00	Fiber, Crude, Asbestos Free (%)	17	15	2.6223	0.33336	0.31782	0.14227	0.34821	12.12%	5.425%	13.28%	2.4475
004.06	Fiber, Fibertec (%)	23	22	2.6356	0.43037	0.42425	0.10228	0.43640	16.10%	3.881%	16.56%	4.2666
004.07	Fiber, ANKOM (%)	64	61	2.3748	0.41602	0.40656	0.12477	0.42527	17.12%	5.254%	17.91%	3.4086
004.11	Fiber, NIR (%)	8	8	2.6169	0.65713	0.65604	0.05344	0.65822	25.07%	2.042%	25.15%	12.316
005.00	Ash, 2h @ 600°C (%)	102	91	6.4579	0.14085	0.13567	0.05352	0.14585	2.10%	0.829%	2.26%	2.7250
005.05	Ash, 3h @ 550°C (%)	25	23	6.6160	0.10848	0.10435	0.04193	0.11245	1.58%	0.634%	1.70%	2.6821
005.11	Ash, NIR (%)	8	8	8.1375	2.4890	2.4870	0.13897	2.4909	30.56%	1.708%	30.61%	17.924
005.99	Ash, Miscellaneous (%)	15	15	6.5220	0.15314	0.13830	0.09302	0.16667	2.12%	1.426%	2.56%	1.7917
008.02	Fiber, Acid Detergent (%)	16	15	3.7558	0.73821	0.71577	0.25540	0.75998	19.06%	6.800%	20.23%	2.9756
008.08	Fiber, Acid Detergent, ANKOM (%)	43	41	3.6542	0.82713	0.81149	0.22642	0.84248	22.21%	6.196%	23.05%	3.7209
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	10	9	8.3388	1.4946	1.4856	0.23197	1.5036	17.82%	2.782%	18.03%	6.4816
009.09	Fiber, Neutral Detergent, ANKOM (%)	37	34	8.4354	1.8905	1.8842	0.21835	1.8968	22.34%	2.589%	22.49%	8.6869
010.99	Moisture, Miscellaneous (%)	19	17	7.3515	0.53957	0.52328	0.18610	0.55539	7.12%	2.531%	7.55%	2.9844
011.01	Loss on Drying, 135°C 2hr (%)	74	66	7.9772	0.37339	0.36677	0.09893	0.37988	4.60%	1.240%	4.76%	3.8398
012.01	Starch, Megazyme (%)	9	8	32.458	5.2340	5.2107	0.69855	5.2573	16.05%	2.152%	16.20%	7.5260
013.00	Fat, Acid hydrolysis (%)	21	20	6.5428	0.54372	0.53899	0.10121	0.54841	8.24%	1.547%	8.38%	5.4186
013.02	Fat, Mojonnier, Bak Ext (%)	21	20	6.9176	0.50945	0.49665	0.16049	0.52193	7.18%	2.320%	7.55%	3.2522
019.00	Calcium, Ox-Mn04 Vol. (%)	13	12	1.0621	0.09071	0.08863	0.02730	0.09274	8.34%	2.570%	8.73%	3.3973

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
019.31	Calcium, AAS, Dry ash (%)	24	21	1.0291	0.03806	0.03335	0.02594	0.04225	3.24%	2.520%	4.11%	1.6290
019.41	Calcium, ICP, Dry ash (%)	33	29	1.0480	0.03861	0.03759	0.01249	0.03961	3.59%	1.192%	3.78%	3.1718
019.42	Calcium, ICP, Open vessel (%)	23	21	1.0409	0.07727	0.07494	0.02665	0.07953	7.20%	2.560%	7.64%	2.9846
019.43	Calcium, ICP, Microwave (%)	22	20	1.0395	0.04466	0.04085	0.02551	0.04816	3.93%	2.454%	4.63%	1.8877
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	13	11	303.79	20.396	20.216	3.8187	20.574	6.65%	1.257%	6.77%	5.3877
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	22	20	300.46	25.710	25.007	8.4450	26.394	8.32%	2.811%	8.78%	3.1254
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	21	19	331.93	23.387	22.825	7.2078	23.936	6.88%	2.172%	7.21%	3.3208
022.43	Copper, ICP, Microwave (mg / kg (ppm))	19	17	330.49	15.699	14.901	6.9885	16.459	4.51%	2.115%	4.98%	2.3551
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	13	10	512.61	30.228	29.913	6.1491	30.539	5.84%	1.200%	5.96%	4.9664
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	23	20	503.45	35.498	34.922	9.0064	36.065	6.94%	1.789%	7.16%	4.0044
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	16	14	392.50	83.513	83.219	9.8908	83.805	21.20%	2.520%	21.35%	8.4730
025.43	Iron, ICP, Microwave (mg / kg (ppm))	17	16	472.55	66.292	65.689	12.616	66.890	13.90%	2.670%	14.15%	5.3020
027.31	Magnesium, AAS, Dry ash (%)	14	13	0.18031	0.00731	0.00680	0.00381	0.00780	3.77%	2.114%	4.32%	2.0453
027.41	Magnesium, ICP, Dry ash (%)	25	23	0.18012	0.00596	0.00528	0.00390	0.00656	2.93%	2.165%	3.64%	1.6831
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.17496	0.01172	0.01096	0.00586	0.01243	6.26%	3.349%	7.10%	2.1209
027.43	Magnesium, ICP, Microwave (%)	18	17	0.17854	0.01193	0.01144	0.00480	0.01241	6.41%	2.689%	6.95%	2.5842
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	12	12	59.966	3.9828	3.7852	1.7521	4.1711	6.31%	2.922%	6.96%	2.3807
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	24	21	59.969	2.5047	2.3532	1.2132	2.6475	3.92%	2.023%	4.41%	2.1823
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	20	18	61.390	7.6067	7.5015	1.7822	7.7103	12.22%	2.903%	12.56%	4.3264
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	17	15	59.667	2.9053	2.7805	1.1911	3.0249	4.66%	1.996%	5.07%	2.5397
031.01	Phosphorus, Photometric (%)	43	39	0.69109	0.03404	0.03358	0.00783	0.03448	4.86%	1.132%	4.99%	4.4065
031.41	Phosphorus, ICP, Dry ash (%)	32	28	0.68885	0.03273	0.03235	0.00704	0.03311	4.70%	1.022%	4.81%	4.7029
031.42	Phosphorus, ICP, Open vessel (%)	23	23	0.67788	0.04821	0.04387	0.02826	0.05219	6.47%	4.169%	7.70%	1.8467
031.43	Phosphorus, ICP, Microwave (%)	21	19	0.68559	0.03076	0.02998	0.00973	0.03152	4.37%	1.419%	4.60%	3.2401
032.31	Potassium, AAS, Dry ash (%)	15	14	0.98979	0.06059	0.05923	0.01806	0.06193	5.98%	1.825%	6.26%	3.4285
032.41	Potassium, ICP, Dry ash (%)	25	22	0.98527	0.03095	0.02865	0.01656	0.03309	2.91%	1.681%	3.36%	1.9981
032.42	Potassium, ICP, Open vessel (%)	22	21	1.0319	0.05800	0.05624	0.02003	0.05970	5.45%	1.941%	5.79%	2.9805
032.43	Potassium, ICP, Microwave (%)	17	16	0.98774	0.05760	0.05664	0.01484	0.05855	5.73%	1.502%	5.93%	3.9465
033.00	Salt as chloride, Sol Cl (%)	20	18	0.32937	0.04221	0.04077	0.01549	0.04361	12.38%	4.704%	13.24%	2.8146
033.01	Salt as chloride, Poten Cl (%)	29	27	0.37971	0.02106	0.01985	0.00998	0.02222	5.23%	2.629%	5.85%	2.2252
033.99	Salt, Miscellaneous (%)	9	8	0.34219	0.03955	0.03826	0.01418	0.04080	11.18%	4.144%	11.92%	2.8775
035.31	Sodium, AAS, Dry ash (%)	17	15	0.10472	0.00992	0.00943	0.00435	0.01038	9.00%	4.154%	9.92%	2.3871
035.41	Sodium, ICP, Dry ash (%)	26	21	0.11002	0.01732	0.01723	0.00254	0.01742	15.66%	2.313%	15.83%	6.8444
035.42	Sodium, ICP, Open vessel (%)	20	19	0.10493	0.00865	0.00807	0.00439	0.00919	7.69%	4.182%	8.76%	2.0937
035.43	Sodium, ICP, Microwave (%)	16	15	0.10276	0.00964	0.00867	0.00597	0.01053	8.44%	5.812%	10.25%	1.7629
036.42	Sulfur, ICP, Open vessel (%)	22	19	0.30004	0.01931	0.01851	0.00777	0.02008	6.17%	2.589%	6.69%	2.5848
036.43	Sulfur, ICP, Microwave (%)	11	10	0.30321	0.01705	0.01637	0.00672	0.01770	5.40%	2.218%	5.84%	2.6321
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	16	14	1,246.4	61.368	59.978	18.363	62.726	4.81%	1.473%	5.03%	3.4158
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	26	21	1,268.7	28.053	22.235	24.190	32.856	1.75%	1.907%	2.59%	1.3583
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	20	18	1,258.3	69.017	66.908	23.949	71.065	5.32%	1.903%	5.65%	2.9674

Test Material Code # 201631

Issue Date : 12/31/2016

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
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	21	19	1,301.2	122.22	121.48	18.876	122.94	9.34%	1.451%	9.45%	6.5130
051.03	Chlortetracycline, LC (mg / kg (ppm))	13	12	40.066	9.3564	9.0513	3.3512	9.6518	22.59%	8.364%	24.09%	2.8801
109.02	Vitamin E, LC (IU/kg)	13	10	10.470	3.7183	3.6759	0.79182	3.7602	35.11%	7.563%	35.91%	4.7488
120.00	Alanine, Post-col Ninhydrin Der (%)	18	17	1.0374	0.03885	0.03826	0.00957	0.03944	3.69%	0.923%	3.80%	4.1192
121.00	Arginine, Post-col Ninhydrin Der (%)	18	17	1.3179	0.05472	0.05321	0.01805	0.05619	4.04%	1.370%	4.26%	3.1124
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	17	2.0926	0.04538	0.04188	0.02471	0.04863	2.00%	1.181%	2.32%	1.9681
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	18	16	0.31188	0.02233	0.02158	0.00808	0.02305	6.92%	2.592%	7.39%	2.8510
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	17	3.5907	0.06871	0.06465	0.03292	0.07255	1.80%	0.917%	2.02%	2.2038
126.00	Glycine, Post-col Ninhydrin Der (%)	18	17	0.92604	0.03016	0.02954	0.00859	0.03076	3.19%	0.928%	3.32%	3.5816
127.00	Histidine, Post-col Ninhydrin Der (%)	18	16	0.53095	0.01762	0.01704	0.00633	0.01818	3.21%	1.192%	3.42%	2.8722
128.00	Isoleucine, Post-col Ninhydrin Der (%)	18	17	0.86211	0.04147	0.04033	0.01368	0.04259	4.68%	1.587%	4.94%	3.1136
129.00	Leucine, Post-col Ninhydrin Der (%)	18	17	1.6615	0.04513	0.04373	0.01582	0.04650	2.63%	0.952%	2.80%	2.9390
130.00	L-Lysine, Post-col Ninhydrin Der (%)	20	19	1.2946	0.06425	0.06348	0.01403	0.06501	4.90%	1.084%	5.02%	4.6342
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	18	16	0.34182	0.02155	0.02129	0.00477	0.02182	6.23%	1.397%	6.38%	4.5688
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	16	0.98240	0.02365	0.02235	0.01097	0.02489	2.27%	1.117%	2.53%	2.2684
133.00	Proline, Post-col Ninhydrin Der (%)	18	17	1.1488	0.02475	0.02230	0.01517	0.02697	1.94%	1.321%	2.35%	1.7777
134.00	Serine, Post-col Ninhydrin Der (%)	18	15	0.99358	0.03561	0.03535	0.00609	0.03587	3.56%	0.613%	3.61%	5.8890
135.00	Threonine, Post-col Ninhydrin Der (%)	18	17	0.79595	0.02716	0.02651	0.00834	0.02780	3.33%	1.048%	3.49%	3.3314
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	10	0.65109	0.07969	0.07961	0.00499	0.07977	12.23%	0.766%	12.25%	15.998
138.00	Valine, Post-col Ninhydrin Der (%)	18	16	0.96120	0.04490	0.04423	0.01094	0.04556	4.60%	1.139%	4.74%	4.1631

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