



AAFCO
Proficiency Testing Program



Animal Feed Scheme

Lamb Feed, Medicated

Test Material Code # 201731

Method Summary Report

(Precision Report Follows)

Methods Reported: 356

Labs Reporting: 196

Issue Date : 12/31/2017

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)	Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	1	1	1.1000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	7	7	8.5180	0.45427	8.5180	0.51514	0.24338	6.05%	0.10857	2.90%
001.03	Loss on Drying, Low temp. methods (%)	5	5	9.0210	0.10579	9.0210	0.10579	0.05914	1.17%	0.03400	2.87%
001.05	Loss on Drying, LECO (%)	2	2	8.6425	0.13081						
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	43	42	8.8174	0.49962	8.8684	0.23308	0.04496	2.63%	0.08386	2.88%
001.99	Loss on Drying, Miscellaneous (%)	22	22	8.6983	0.45172	8.7318	0.37910	0.10103	4.34%	0.14182	2.89%
002.00	Protein, Crude (%)	3	3	17.747	0.16042	17.747	0.16042	0.11577	0.90%	0.39333	2.37%
002.01	Protein, Auto Kjel-Foss (%)	12	11	17.594	0.20337	17.598	0.22305	0.08406	1.27%	0.09091	2.38%
002.02	Protein, Semiauto Autoanalyzer (%)	4	4	17.550	0.41210	17.550	0.41210	0.25756	2.35%	0.12253	2.39%
002.04	Protein, Copper Catalyst (%)	4	4	18.821	3.2295	18.821	3.2295	2.0184	17.16%	0.13250	2.31%
002.05	Protein, Copper, Boric Acid (%)	29	28	17.699	0.27866	17.678	0.18573	0.04387	1.05%	0.08188	2.38%
002.06	Protein, Combustion Nitrogen Analyzer (%)	126	123	17.924	0.38891	17.909	0.22371	0.02521	1.25%	0.14219	2.36%
002.08	Protein, Cu/Ti (%)	1	1	17.510							
002.10	Protein, Block dig/distillation (%)	1	1	18.075							
002.11	Protein, NIR (%)	8	8	19.466	1.8560	19.466	2.1047	0.93015	10.81%	0.19000	2.27%
002.99	Protein, Miscellaneous (%)	4	3	17.793	0.68676	17.793	0.68676	0.49563	3.86%	0.06667	2.37%
003.00	Fat, Eth Ext., Direct (%)	12	12	2.3901	0.59097	2.3901	0.67017	0.24183	28.04%	0.10129	3.51%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	2	2	3.3100	0.01414						
003.06	Fat, Pet Ether (%)	20	20	2.9799	0.33371	2.9858	0.36551	0.10216	12.24%	0.08415	3.39%
003.09	Fat, Soxtec, Eth Ext (%)	20	20	2.6900	0.47970	2.7224	0.45678	0.12768	16.78%	0.10714	3.44%
003.10	Fat, Soxtec, Pet Ether (%)	28	28	2.4982	0.37220	2.4976	0.37747	0.08917	15.11%	0.10700	3.48%
003.11	Fat, NIR (%)	8	8	2.8994	1.0067	2.8994	1.1416	0.50452	39.37%	0.05375	3.41%
003.12	Fat, Hexane Ext (%)	4	3	2.0883	0.55408	2.0883	0.55408	0.39987	26.53%	0.01667	3.58%
003.13	Fat, Soxtec, Hexane Ext. (%)	8	8	2.7275	0.39663	2.6824	0.33797	0.14936	12.60%	0.12000	3.45%
003.14	Fat, Ankom (%)	43	42	2.1616	0.41682	2.1387	0.38691	0.07463	18.09%	0.15674	3.57%
003.99	Fat, Miscellaneous (%)	7	6	3.2258	0.37207	3.2258	0.42192	0.21531	13.08%	0.05167	3.35%
004.00	Fiber, Crude, Asbestos Free (%)	15	15	9.2200	0.35510	9.2077	0.31304	0.10103	3.40%	0.15869	2.86%
004.01	Fiber, Sing Filt (%)	1	1	10.200							
004.03	Fiber, Fritted Glass (%)	4	4	8.8434	1.3705	8.8434	1.3705	0.85656	15.50%	0.46125	2.88%
004.06	Fiber, Fibertec (%)	28	27	9.1447	0.43338	9.1383	0.46190	0.11112	5.05%	0.14902	2.87%

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004.07	Fiber, ANKOM (%)	65	64	9.3986	0.96272	9.4003	0.99688	0.15576	10.60%	0.34663	2.85%
004.11	Fiber, NIR (%)	7	7	9.0179	1.7864	8.5897	0.87552	0.41364	10.19%	0.20429	2.89%
004.99	Fiber, Miscellaneous (%)	5	4	8.3038	0.37084	8.3038	0.37084	0.23178	4.47%	0.09250	2.91%
005.00	Ash, 2h @ 600°C (%)	94	92	13.489	0.49679	13.518	0.41679	0.05432	3.08%	0.11887	2.70%
005.02	Ash, LECO (%)	2	2	13.418	0.97934						
005.03	Ash, Microwave furnace (%)	1	1	13.100							
005.05	Ash, 3h @ 550°C (%)	33	31	13.909	0.42955	13.915	0.42273	0.09490	3.04%	0.11378	2.68%
005.11	Ash, NIR (%)	7	7	12.171	3.3208	12.171	3.7658	1.7792	30.94%	0.32429	2.75%
005.99	Ash, Miscellaneous (%)	10	10	13.942	0.25397	13.954	0.26083	0.10310	1.87%	0.07800	2.68%
006.00	Total sugars, As sucrose (%)	2	2	1.8150	2.1072						
006.01	Total sugars, Mod. Fehling Soln (%)	1	1	3.8100							
006.99	Total sugars, Miscellaneous (%)	3	3	3.5122	1.2967	3.5122	1.2967	0.93581	36.92%	0.43463	3.31%
008.02	Fiber, Acid Detergent (%)	14	14	11.782	1.1581	11.764	0.98995	0.33072	8.42%	0.20061	2.76%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	12.100							
008.08	Fiber, Acid Detergent, ANKOM (%)	40	40	11.603	0.88851	11.529	0.70300	0.13894	6.10%	0.27549	2.77%
008.99	Fiber, Acid Detergent Miscellaneous (%)	5	5	11.708	1.3228	11.708	1.3228	0.73947	11.30%	0.28400	2.76%
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	23.780							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	14	14	25.688	1.5284	25.724	1.4602	0.48780	5.68%	0.41140	1.97%
009.09	Fiber, Neutral Detergent, ANKOM (%)	43	43	24.612	1.2332	24.587	1.2841	0.24477	5.22%	0.40405	2.02%
009.99	Fiber, Neutral Det Miscellaneous (%)	4	3	24.057	3.8858	24.057	3.8858	2.8043	16.15%	0.22667	2.04%
010.03	Moisture, Karl-Fischer (%)	2	2	8.3150	0.65761						
010.11	Moisture, NIR (%)	6	6	8.8283	0.49481	8.8940	0.39991	0.20408	4.50%	0.12667	2.88%
010.99	Moisture, Miscellaneous (%)	23	22	8.9833	0.50923	8.9306	0.44660	0.11902	5.00%	0.08104	2.88%
011.01	Loss on Drying, 135°C 2hr (%)	63	63	9.4785	0.34792	9.5157	0.27600	0.04347	2.90%	0.10460	2.85%
011.02	Loss on Drying, 130°C for 2 hours (%)	4	4	9.4375	0.43849	9.4375	0.43849	0.27406	4.65%	0.19500	2.85%
011.99	Loss on Drying, High Temp. Methods Miscellaneous	1	1	9.7800							
012.00	Starch, Polarimetric (Ewers) (%)	11	11	20.626	0.56924	20.642	0.60912	0.22957	2.95%	0.18837	2.20%
012.01	Starch, Megazyme (%)	9	9	18.331	2.1882	18.759	1.2842	0.53507	6.85%	0.60676	2.31%
012.03	Starch, Enzymatic (%)	4	4	19.264	0.66050	19.264	0.66050	0.41281	3.43%	0.81250	2.28%
012.04	Starch, YSI Analyzer (%)	6	6	19.023	0.86769	19.023	0.98396	0.50213	5.17%	0.40167	2.29%
012.11	Starch, NIR (%)	4	4	21.140	1.5233	21.140	1.5233	0.95206	7.21%	0.21000	2.17%
012.99	Starch, Miscellaneous (%)	1	1	34.270							
013.00	Fat, Acid hydrolysis (%)	18	18	3.6863	0.70540	3.6828	0.67618	0.19922	18.36%	0.12811	3.29%
013.02	Fat, Mojonier, Bak Ext (%)	15	15	4.4532	0.29838	4.4321	0.25500	0.08230	5.75%	0.15344	3.20%
013.08	Fat, Roese-Gottlieb Modified (%)	1	1	2.1606							
013.10	Fat, Soxtec-Acid Hydrolysis (%)	5	5	3.5626	0.60639	3.5626	0.60639	0.33898	17.02%	0.13456	3.30%
013.13	Fat, Ankom- Acid Hydrolysis (%)	7	7	4.5687	0.79016	4.5483	0.84914	0.40118	18.67%	0.16080	3.18%
013.99	Fat, Pretreat or extended ext., Misc (%)	1	1	3.4500							

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015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	4	4	240.34	36.255	240.34	36.255	22.659	15.08%	2.3175	7.01%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	221.00							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	6	6	233.02	18.430	233.02	20.900	10.666	8.97%	7.0516	7.04%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	185.00							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	3	9.9650	1.5725	9.9650	1.5725	1.1349	15.78%	0.25667	11.32%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	5	4	9.9769	0.45680	9.9769	0.45680	0.28550	4.58%	0.20325	11.32%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	5	4	10.445	1.1155	10.445	1.1155	0.69719	10.68%	0.40500	11.24%
019.00	Calcium, Ox-Mn04 Vol. (%)	11	11	2.9106	0.06232	2.9094	0.06792	0.02560	2.33%	0.06055	3.41%
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	3.0211							
019.08	Calcium, EDTA (%)	8	8	2.8369	0.18178	2.8611	0.14483	0.06401	5.06%	0.04808	3.41%
019.09	Calcium, Ion-selective electrode (%)	1	1	2.7215							
019.31	Calcium, AAS, Dry ash (%)	21	21	2.9335	0.17685	2.9433	0.15041	0.04103	5.11%	0.05531	3.40%
019.32	Calcium, AAS, Open vessel (%)	3	3	3.0557	0.06153	3.0557	0.06153	0.04441	2.01%	0.02800	3.38%
019.33	Calcium, AAS, Microwave (%)	3	3	3.0917	0.03819	3.0917	0.03819	0.02756	1.24%	0.04333	3.37%
019.41	Calcium, ICP, Dry ash (%)	31	31	2.9467	0.15494	2.9507	0.16156	0.03627	5.48%	0.05026	3.40%
019.42	Calcium, ICP, Open vessel (%)	23	23	2.9391	0.19211	2.9268	0.14128	0.03682	4.83%	0.06929	3.40%
019.43	Calcium, ICP, Microwave (%)	26	26	2.9411	0.17222	2.9330	0.15305	0.03752	5.22%	0.05501	3.40%
019.44	Calcium, ICP, Dry ash (%)	1	1	2.9350							
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	2.8057	0.23273	2.8057	0.23273	0.16796	8.29%	0.05847	3.42%
019.53	Calcium, ICP-MS, Microwave (%)	2	2	2.8318	0.05409						
019.99	Calcium, Miscellaneous (%)	7	6	2.9283	0.17131	2.9403	0.16577	0.08459	5.64%	0.03000	3.40%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	3	3	3.2750	0.47893	3.2750	0.47893	0.34564	14.62%	0.17000	13.38%
021.32	Cobalt, AAS, Open vessel (mg / kg (ppm))	1	1	3.0000							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	4	4	2.8884	0.70895	2.8884	0.70895	0.44309	24.54%	0.08188	13.64%
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	4	4	2.8451	0.29279	2.8451	0.29279	0.18299	10.29%	0.33775	13.67%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	7	6	3.1238	0.40977	3.1238	0.46468	0.23713	14.88%	0.04662	13.48%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	3	3	2.6183	0.33130	2.6183	0.33130	0.23910	12.65%	0.07667	13.84%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	3	3	2.9711	0.42600	2.9711	0.42600	0.30744	14.34%	0.18797	13.58%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	8	8	12.369	2.3939	12.340	2.6482	1.1703	21.46%	0.74875	10.96%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	3	3	10.592	1.3410	10.592	1.3410	0.96778	12.66%	0.81867	11.21%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	2	2	11.633	0.25845						
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	23	22	11.493	2.2835	11.169	1.3255	0.35324	11.87%	0.63409	11.13%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	24	23	11.511	2.8672	10.914	1.0028	0.26138	9.19%	0.79252	11.16%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	22	10.507	1.1661	10.589	0.98172	0.26163	9.27%	0.39211	11.21%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	1	1	10.650							
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	3	3	9.5217	1.9901	9.5217	1.9901	1.4362	20.90%	0.46333	11.40%
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	2	2	9.6100	2.1779						
022.99	Copper, Miscellaneous (mg / kg (ppm))	5	4	10.768	0.73153	10.768	0.73153	0.45721	6.79%	0.26000	11.19%

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023.01	Fluorine, Ion Sel Elect (mg / kg (ppm))	1	1	48.350							
024.03	Iodine, Ion-selective electrode (mg / kg (ppm))	1	1	7.2000							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	9	8	589.40	39.020	589.68	43.625	19.280	7.40%	7.5753	6.12%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	1	1	639.50							
025.33	Iron, AAS, Microwave (mg / kg (ppm))	1	1	842.10							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	23	23	581.72	56.761	587.74	46.577	12.140	7.92%	17.474	6.13%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	20	19	517.96	135.62	523.31	140.99	40.431	26.94%	31.908	6.24%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	21	21	594.31	34.100	592.79	32.862	8.9639	5.54%	22.109	6.12%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	369.50							
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	1	1	497.00							
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	594.17	10.324	594.17	10.324	9.1252	1.74%	2.3333	6.12%
027.31	Magnesium, AAS, Dry ash (%)	16	15	0.58430	0.02541	0.58495	0.02738	0.00884	4.68%	0.01230	4.34%
027.32	Magnesium, AAS, Open vessel (%)	3	3	0.59073	0.05570	0.59073	0.05570	0.04923	9.43%	0.00947	4.33%
027.33	Magnesium, AAS, Microwave (%)	2	2	0.60625	0.02298						
027.41	Magnesium, ICP, Dry ash (%)	26	26	0.58661	0.02914	0.58638	0.02408	0.00590	4.11%	0.00793	4.33%
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.59550	0.03790	0.59570	0.02722	0.00761	4.57%	0.01621	4.32%
027.43	Magnesium, ICP, Microwave (%)	24	24	0.58299	0.03126	0.58418	0.03108	0.00793	5.32%	0.00793	4.34%
027.44	Magnesium, ICP, Dry ash (%)	1	1	0.57700							
027.52	Magnesium, ICP-MS, Open vessel (%)	3	3	0.56485	0.02126	0.56485	0.02126	0.01534	3.76%	0.00837	4.36%
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.78800	0.29981						
027.99	Magnesium, Miscellaneous (%)	5	5	0.59379	0.04137	0.59379	0.04137	0.02313	6.97%	0.01626	4.33%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	11	11	327.27	20.396	327.27	23.129	8.7170	7.07%	8.3857	6.69%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	2	2	340.01	23.317						
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	1	1	311.50							
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	24	24	307.03	39.360	313.34	24.529	6.2586	7.83%	10.127	6.74%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	22	21	329.16	25.927	327.81	23.851	6.5059	7.28%	9.8915	6.69%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	24	24	330.07	18.719	327.92	16.304	4.1600	4.97%	8.8059	6.69%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	1	1	328.50							
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	2	2	341.10	16.829						
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	2	2	296.25	31.466						
028.99	Manganese, Miscellaneous (mg / kg (ppm))	4	4	320.49	12.635	320.49	12.635	7.8969	3.94%	7.0650	6.71%
031.00	Phosphorus, Vol (%)	2	2	1.0600	0.07071						
031.01	Phosphorus, Photometric (%)	37	37	1.0491	0.07049	1.0581	0.04227	0.00869	4.00%	0.01558	3.97%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	2	2	1.1025	0.01061						
031.03	Phosphorus, Autoanalyzer (%)	4	4	1.1140	0.01317	1.1140	0.01317	0.00823	1.18%	0.02108	3.94%
031.41	Phosphorus, ICP, Dry ash (%)	29	29	1.0625	0.05644	1.0660	0.05120	0.01189	4.80%	0.01582	3.96%
031.42	Phosphorus, ICP, Open vessel (%)	24	24	1.0636	0.05823	1.0640	0.05973	0.01524	5.61%	0.03427	3.96%
031.43	Phosphorus, ICP, Microwave (%)	26	25	1.0694	0.05342	1.0682	0.05057	0.01264	4.73%	0.01916	3.96%

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031.44	Phosphorus, ICP, Dry ash (%)	1	1	1.0650							
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	1.0208	0.07665						
031.53	Phosphorus, ICP-MS, Microwave (%)	3	3	1.0780	0.07923	1.0780	0.07923	0.05718	7.35%	0.11800	3.95%
031.99	Phosphorus, Miscellaneous (%)	7	7	1.0143	0.07260	1.0233	0.05994	0.02832	5.86%	0.01714	3.99%
032.02	Potassium, Flame Emission (%)	2	2	1.2100	0.00707						
032.31	Potassium, AAS, Dry ash (%)	13	13	1.1666	0.24586	1.2123	0.09861	0.03419	8.13%	0.02654	3.89%
032.32	Potassium, AAS, Open vessel (%)	2	2	1.1825	0.12374						
032.33	Potassium, AAS, Microwave (%)	1	1	1.3150							
032.41	Potassium, ICP, Dry ash (%)	26	25	1.1977	0.05091	1.1957	0.05270	0.01318	4.41%	0.02194	3.89%
032.42	Potassium, ICP, Open vessel (%)	23	23	1.2276	0.07920	1.2195	0.06592	0.01718	5.41%	0.03387	3.88%
032.43	Potassium, ICP, Microwave (%)	24	24	1.2103	0.08545	1.2059	0.07012	0.01789	5.81%	0.02155	3.89%
032.44	Potassium, ICP, Dry ash (%)	1	1	1.1250							
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	1.1670	0.07502						
032.53	Potassium, ICP-MS, Microwave (%)	2	2	1.0850	0.12021						
032.99	Potassium, Miscellaneous (%)	3	3	0.97833	0.29884	0.97833	0.29884	0.26414	30.55%	0.01000	4.01%
033.00	Salt as chloride, Sol Cl (%)	22	21	3.1755	0.15228	3.1650	0.12283	0.03350	3.88%	0.04682	3.36%
033.01	Salt as chloride, Poten Cl (%)	34	32	3.2675	0.08067	3.2612	0.06677	0.01475	2.05%	0.02700	3.35%
033.03	Salt as chloride, Quantab (%)	4	4	3.2563	0.47310	3.2563	0.47310	0.29569	14.53%	0.22250	3.35%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	3.1450	0.04243						
033.99	Salt, Miscellaneous (%)	10	10	3.0441	0.43144	3.0441	0.48926	0.19340	16.07%	0.04210	3.38%
034.04	Selenium, AA, Hydride (mg / kg (ppm))	6	6	1.7033	0.32660	1.7033	0.37036	0.18900	21.74%	0.12333	14.76%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	2	2	1.2775	0.26517						
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	2	2	2.1525	0.21567						
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	3	3	1.8085	0.25061	1.8085	0.25061	0.18086	13.86%	0.13213	14.63%
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	6	6	1.9517	0.21328	1.9102	0.13737	0.07010	7.19%	0.11000	14.51%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	5	4	1.8664	0.07084	1.8664	0.07084	0.04428	3.80%	0.03843	14.56%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	1.6265							
035.01	Sodium, Ion-selective electrode (%)	2	2	0.83975	0.16228						
035.02	Sodium, Em Spect (%)	1	1	0.82000							
035.05	Sodium, Flame Emission (%)	2	2	1.0075	0.01061						
035.31	Sodium, AAS, Dry ash (%)	12	11	0.85881	0.26660	0.92133	0.10333	0.03894	11.22%	0.01203	4.05%
035.32	Sodium, AAS, Open vessel (%)	2	2	0.89600	0.06223						
035.33	Sodium, AAS, Microwave (%)	1	1	0.94500							
035.41	Sodium, ICP, Dry ash (%)	26	26	0.89582	0.13873	0.92138	0.04909	0.01204	5.33%	0.01800	4.05%
035.42	Sodium, ICP, Open vessel (%)	18	18	0.94851	0.04976	0.94882	0.04988	0.01469	5.26%	0.02982	4.03%
035.43	Sodium, ICP, Microwave (%)	21	21	0.92241	0.05960	0.92369	0.05633	0.01536	6.10%	0.01828	4.05%
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.93320	0.03295						
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.90175	0.00884						

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035.99	Sodium, Miscellaneous (%)	4	4	0.95000	0.03764	0.95000	0.03764	0.02353	3.96%	0.04500	4.03%
036.04	Sulfur, LECO (%)	2	2	0.34750	0.04596						
036.42	Sulfur, ICP, Open vessel (%)	18	17	0.33321	0.02643	0.33134	0.02517	0.00763	7.60%	0.00893	4.72%
036.43	Sulfur, ICP, Microwave (%)	13	13	0.33058	0.02740	0.32868	0.02636	0.00914	8.02%	0.00548	4.73%
036.52	Sulfur, ICP-MS, Open vessel (%)	2	2	0.32798	0.02196						
036.99	Sulfur, Miscellaneous (%)	2	2	0.35000	0.01414						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	13	13	339.49	45.688	350.58	12.602	4.3689	3.59%	10.881	6.62%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	3	3	373.79	43.638	373.79	43.638	31.493	11.67%	10.483	6.56%
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	2	2	339.07	15.454						
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	25	24	331.37	45.685	337.38	28.792	7.3464	8.53%	11.292	6.66%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	22	20	346.86	30.604	348.52	30.669	8.5722	8.80%	13.825	6.63%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	22	348.27	29.151	345.82	26.478	7.0564	7.66%	8.7906	6.64%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	1	1	351.50							
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	2	2	306.03	43.098						
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	2	2	342.83	135.30						
037.99	Zinc, Miscellaneous (mg / kg (ppm))	6	6	349.88	30.689	349.88	34.801	17.759	9.95%	14.118	6.62%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	4	4	7.3312	0.73610	7.3312	0.73610	0.46006	10.04%	0.39288	11.85%
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	5	5	7.6361	0.83347	7.6361	0.83347	0.46592	10.91%	0.23620	11.78%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	7	7	8.0802	1.1942	8.0578	1.3032	0.61569	16.17%	0.65004	11.69%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	3	3	6.7933	0.38276	6.7933	0.38276	0.27623	5.63%	0.42667	11.99%
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	2	2	6.8775	0.43844						
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	15.790							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	14.466							
042.00	Chloride, Titrimetric (%)	2	2	1.9958	0.00106						
101.00	Choline Chloride, Microbiological (mg / kg (ppm))	1	1	1,400.0							
101.01	Choline Chloride, Chem (mg / kg (ppm))	1	1	659.00							
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	874.50							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	102.50							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	8.4700							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	2.8225	0.07425						
104.03	Riboflavin, LC (mg / kg (ppm))	1	1	0.81500							
105.00	Thiamine, LC (mg / kg (ppm))	1	1	3.3950							
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	4.2350							
106.00	Vitamin A, Color (KU / kg)	3	3	65.793	8.8916	65.793	8.8916	6.4170	13.51%	3.1559	
106.01	Vitamin A, UV (KU / kg)	1	1	66.300							
106.02	Vitamin A, LC (KU / kg)	24	24	60.726	14.317	61.056	15.514	3.9585	25.41%	9.0414	
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	4.0000							
108.02	Vitamin D3, LC (KU / kg)	5	5	5.0180	1.0800	5.0180	1.0800	0.60374	21.52%	0.85200	

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108.99	Vitamin D3, Miscellaneous (KU / kg)	1	1	5.3250							
109.02	Vitamin E, LC (IU/kg)	16	15	249.12	39.133	252.46	35.531	11.468	14.07%	10.599	
109.99	Vitamin E, Miscellaneous (IU/kg)	2	2	234.35	13.930						
112.01	Pyridoxine, LC (µg / g)	1	1	6.8900							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.3650							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.19800							
120.00	Alanine, Post-col Ninhydrin Der (%)	19	18	0.85276	0.04086	0.84769	0.02511	0.00740	2.96%	0.00811	4.10%
120.02	Alanine, Post-col OPA Der (%)	1	1	0.85300							
120.05	Alanine, Pre-col AQC Der (%)	3	3	0.81450	0.03328	0.81450	0.03328	0.02402	4.09%	0.01700	4.13%
120.99	Alanine, Miscellaneous (%)	1	1	0.84500							
121.00	Arginine, Post-col Ninhydrin Der (%)	19	19	1.0766	0.04851	1.0736	0.03031	0.00869	2.82%	0.01211	3.96%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.0740							
121.05	Arginine, Pre-col AQC Der (%)	3	3	1.0732	0.02941	1.0732	0.02941	0.02122	2.74%	0.02167	3.96%
122.00	Aspartic, Post-col Ninhydrin Der (%)	19	19	1.4464	0.07744	1.4368	0.06042	0.01733	4.21%	0.02133	3.79%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.4615							
122.05	Aspartic, Pre-col AQC Der (%)	3	3	1.4522	0.10103	1.4522	0.10103	0.07291	6.96%	0.08033	3.78%
122.99	Aspartic, Miscellaneous (%)	1	1	1.5200							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	19	18	0.30298	0.02529	0.30182	0.02113	0.00623	7.00%	0.00578	4.79%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.31050							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	2	2	0.30650	0.01980						
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.29500							
125.00	Glutamic, Post-col Ninhydrin Der (%)	19	19	2.9314	0.19089	2.9076	0.11636	0.03337	4.00%	0.03479	3.41%
125.02	Glutamic, Post-col OPA Der (%)	1	1	2.9230							
125.05	Glutamic, Pre-col AQC Der (%)	3	3	3.0208	0.16421	3.0208	0.16421	0.11851	5.44%	0.08900	3.39%
125.99	Glutamic, Miscellaneous (%)	1	1	3.1500							
126.00	Glycine, Post-col Ninhydrin Der (%)	19	18	0.84602	0.04283	0.84183	0.02798	0.00824	3.32%	0.00754	4.10%
126.02	Glycine, Post-col OPA Der (%)	1	1	0.85450							
126.05	Glycine, Pre-col AQC Der (%)	3	3	0.84133	0.03116	0.84133	0.03116	0.02249	3.70%	0.00600	4.11%
126.99	Glycine, Miscellaneous (%)	1	1	0.82500							
127.00	Histidine, Post-col Ninhydrin Der (%)	19	19	0.43244	0.02163	0.43428	0.02054	0.00589	4.73%	0.00780	4.53%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.42450							
127.05	Histidine, Pre-col AQC Der (%)	3	3	0.42667	0.02139	0.42667	0.02139	0.01891	5.01%	0.00800	4.55%
128.00	Isoleucine, Post-col Ninhydrin Der (%)	19	19	0.60494	0.04610	0.60679	0.03420	0.00981	5.64%	0.00925	4.31%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.61600							
128.05	Isoleucine, Pre-col AQC Der (%)	3	3	0.61517	0.04621	0.61517	0.04621	0.03335	7.51%	0.01500	4.30%
128.99	Isoleucine, Miscellaneous (%)	1	1	0.81500							
129.00	Leucine, Post-col Ninhydrin Der (%)	19	18	1.2451	0.05953	1.2368	0.02756	0.00812	2.23%	0.01175	3.87%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.2725							

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129.05	Leucine, Pre-col AQC Der (%)	3	3	1.2512	0.05686	1.2512	0.05686	0.04104	4.54%	0.03233	3.87%
129.99	Leucine, Miscellaneous (%)	1	1	1.2900							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	19	0.79467	0.05634	0.79728	0.03544	0.01016	4.44%	0.01141	4.14%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.81200							
130.05	L-Lysine, Pre-col AQC Der (%)	3	3	0.80783	0.00861	0.80783	0.00861	0.00621	1.07%	0.02167	4.13%
130.99	L-Lysine, Miscellaneous (%)	2	2	0.80500	0.12728						
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	19	0.24947	0.01702	0.24941	0.01434	0.00411	5.75%	0.00787	4.93%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.24350							
131.05	Methionine, PAO Pre-col AQC Der (%)	2	2	0.22375	0.01591						
131.99	Methionine, Miscellaneous (%)	1	1	0.38000							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	19	19	0.74432	0.04247	0.74490	0.03022	0.00867	4.06%	0.01578	4.18%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.73800							
132.05	Phenylalanine, Pre-col AQC Der (%)	3	3	0.71500	0.02140	0.71500	0.02140	0.01544	2.99%	0.00933	4.21%
133.00	Proline, Post-col Ninhydrin Der (%)	19	19	0.98740	0.06733	0.98370	0.05954	0.01707	6.05%	0.02598	4.01%
133.05	Proline, Pre-col AQC Der (%)	3	3	1.0278	0.03031	1.0278	0.03031	0.02187	2.95%	0.01567	3.98%
133.99	Proline, Miscellaneous (%)	1	1	1.0250							
134.00	Serine, Post-col Ninhydrin Der (%)	19	18	0.78668	0.05402	0.78636	0.03048	0.00898	3.88%	0.01016	4.15%
134.02	Serine, Post-col OPA Der (%)	1	1	0.72800							
134.05	Serine, Pre-col AQC Der (%)	3	3	0.79317	0.01589	0.79317	0.01589	0.01147	2.00%	0.02500	4.14%
134.99	Serine, Miscellaneous (%)	1	1	0.83000							
135.00	Threonine, Post-col Ninhydrin Der (%)	19	18	0.60891	0.03741	0.60509	0.03012	0.00887	4.98%	0.00689	4.31%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.60750							
135.05	Threonine, Pre-col AQC Der (%)	3	3	0.60117	0.01221	0.60117	0.01221	0.00881	2.03%	0.01300	4.32%
135.99	Threonine, Miscellaneous (%)	1	1	0.68500							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	7	7	0.21675	0.03555	0.21675	0.04031	0.01905	18.60%	0.01264	5.03%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.22350	0.00000						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.21100							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	5	5	0.21730	0.00315	0.21730	0.00315	0.00176	1.45%	0.00380	5.03%
136.99	Tryptophan, Miscellaneous (%)	1	1	0.19000							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	13	0.48656	0.08954	0.50533	0.04581	0.01588	9.07%	0.01018	4.43%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.54150							
137.05	Tyrosine, Pre-col AQC Der (%)	3	3	0.54733	0.03058	0.54733	0.03058	0.02207	5.59%	0.01133	4.38%
137.99	Tyrosine, Miscellaneous (%)	1	1	0.56000							
138.00	Valine, Post-col Ninhydrin Der (%)	19	18	0.76772	0.04081	0.77025	0.03183	0.00938	4.13%	0.00901	4.16%
138.02	Valine, Post-col OPA Der (%)	1	1	0.80150							
138.05	Valine, Pre-col AQC Der (%)	3	3	0.77700	0.03291	0.77700	0.03291	0.02909	4.24%	0.01267	4.15%
138.99	Valine, Miscellaneous (%)	1	1	0.83500							
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.15125	0.06894						

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139.02	Taurine, Post-col OPA Der (%)	1		0.00000							
160.99	Fructose, Miscellaneous (%)	6	4	0.18164	0.07740	0.18164	0.07740	0.04837	42.61%	0.04288	5.17%
161.99	Galactose, Miscellaneous (%)	1		0.00000							
162.99	Glucose, Miscellaneous (%)	4	2	0.13250	0.09546	0.13250	0.09546			0.01700	5.42%
163.99	Lactose, Miscellaneous (%)	4									
164.99	Maltose, Miscellaneous (%)	3	1								
165.99	Sucrose, Miscellaneous (%)	7	7	1.7718	0.18394	1.7420	0.13305	0.06286	7.64%	0.10319	3.68%
166.99	Raffinose, Miscellaneous (%)	3	3	0.70817	0.15314	0.70817	0.15314	0.11052	21.62%	0.01700	4.21%
167.99	Stachyose, Miscellaneous (%)	3	3	0.71900	0.13683	0.71900	0.13683	0.09875	19.03%	0.02400	4.20%
354.01	Decoquinatate, LC (UV or FL) (mg/kg (ppm))	3	3	0.69700	0.13018	0.69700	0.13018	0.11506	18.68%	0.06000	16.89%
354.04	Decoquinatate, LC-MS/MS (mg/kg (ppm))	1	1	0.83000							
361.02	Lasalocid sodium, LC (mg/kg (ppm))	6	6	25.721	1.2424	25.721	1.4089	0.71899	5.48%	0.78717	9.81%
361.03	Lasalocid sodium, LC (UV or FL) (mg/kg (ppm))	14	14	26.970	2.9450	26.511	1.9224	0.64224	7.25%	1.5413	9.77%
361.04	Lasalocid sodium, LC-MS (mg/kg (ppm))	1	1	26.900							
361.05	Lasalocid sodium, LC-MS/MS (mg/kg (ppm))	5	4	31.086	2.7907	31.086	2.7907	1.7442	8.98%	1.5775	9.54%
373.03	Oxytetracycline, LC (mg/kg (ppm))	1	1	1.0215							
373.06	Oxytetracycline, LC-MS/MS (mg/kg (ppm))	1	1	0.67000							
392.00	Fenbendazole, LC (UV or FL) (mg/kg (ppm))	1		0.00000							
392.01	Fenbendazole, LC-MS (mg/kg (ppm))	1	1	0.33000							
400.01	Water activity, Aqualab chilled mirror (Units)	6	6	0.54702	0.01924	0.54702	0.02182	0.01114	3.99%	0.00303	
400.99	Water activity, Miscellaneous (Units)	2	2	0.50525	0.01945						
412.01	Dietary Starch, Enzymatic-Colorimetric (%)	1	1	18.615							
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	2	2	0.36250	0.02475						
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.40850	0.03161	0.40850	0.03161	0.02794	7.74%	0.03167	18.30%
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.45200	0.12118	0.45200	0.13741	0.07012	30.40%	0.03093	18.03%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	1	1	0.16300							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.17250	0.02475						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.16748	0.02117	0.16748	0.02401	0.01225	14.33%	0.00745	20.93%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	4.4735	0.27365						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	3	3	7.7318	0.43722	7.7318	0.43722	0.31554	5.65%	0.42567	11.76%
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	1	1	8.6300							
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	4.3000							
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	1	1	6.2998							
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2	2	0.26475	0.33906						
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.33550	0.02093	0.33550	0.02093	0.01850	6.24%	0.03100	18.85%
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	6	5	0.31724	0.05475	0.31724	0.05475	0.03060	17.26%	0.02392	19.01%
529.99	Mercury, Miscellaneous (µg / kg (ppb))	2	2	14.850	12.233						
539.31	Nickel, AAS, Dry ash (mg / kg (ppm))	1	1	4.2250							

Test Material Code # 201731
Issue Date : 12/31/2017

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
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	1	1	3.4400							
539.42	Nickel, ICP, Open vessel (mg / kg (ppm))	1	1	3.5000							
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	1	1	2.5850							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	2	2	3.8627	0.18763						
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1		0.00000							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.01180							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	0.58410							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1	1	0.01415							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.08135							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	0.68705							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	1.7391							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.12305							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	1	1	0.01060							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	1	1	0.01340							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1	1	0.00780							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	1	1	0.00895							
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	1		0.00000							
746.99	Docosapentaenoic Acid n-3 DPA (DHA)7c,10c,13c,16c,19c,22:5), Miscellaneous (% (w/w))	1		0.00000							
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	1	1	0.01170							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c,22:6), Miscellaneous (% (w/w))	1	1	0.00725							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1		0.00000							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	3.3481							

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
Lamb Feed, Medicated
Test Material Code # 201731

Method Precision Report

Methods Reported: 88
Labs Reporting: 196
Issue Date : 12/31/2017

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
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	43	39	8.8174	0.49962	0.28302	0.07187	0.29200	3.19%	0.810%	3.29%	4.0627
001.99	Loss on Drying, Miscellaneous (%)	22	21	8.6983	0.45172	0.31687	0.13022	0.34258	3.61%	1.486%	3.91%	2.6308
002.01	Protein, Auto Kjel-Foss (%)	12	10	17.594	0.20337	0.20746	0.06053	0.21611	1.18%	0.344%	1.23%	3.5705
002.05	Protein, Copper, Boric Acid (%)	29	25	17.699	0.27866	0.17266	0.05379	0.18084	0.98%	0.305%	1.02%	3.3619
002.06	Protein, Combustion Nitrogen Analyzer (%)	126	115	17.924	0.38891	0.24146	0.12153	0.27031	1.35%	0.679%	1.51%	2.2243
003.00	Fat, Eth Ext., Direct (%)	12	12	2.3901	0.59097	0.58808	0.08257	0.59385	24.60%	3.454%	24.85%	7.1924
003.06	Fat, Pet Ether (%)	20	20	2.9799	0.33371	0.32882	0.08050	0.33853	11.03%	2.702%	11.36%	4.2052
003.09	Fat, Soxtec, Eth Ext (%)	20	18	2.6900	0.47970	0.36168	0.09145	0.37307	13.25%	3.351%	13.67%	4.0796
003.10	Fat, Soxtec, Pet Ether (%)	28	27	2.4982	0.37220	0.33540	0.10078	0.35022	13.59%	4.083%	14.19%	3.4752
003.11	Fat, NIR (%)	8	8	2.8994	1.0067	1.0060	0.05226	1.0074	34.70%	1.803%	34.74%	19.276
003.14	Fat, Ankom (%)	43	40	2.1616	0.41682	0.36706	0.14710	0.39544	17.21%	6.897%	18.54%	2.6881
004.00	Fiber, Crude, Asbestos Free (%)	15	14	9.2200	0.35510	0.26314	0.13987	0.29800	2.87%	1.527%	3.25%	2.1306
004.06	Fiber, Fibertec (%)	28	27	9.1447	0.43338	0.42183	0.14050	0.44462	4.61%	1.536%	4.86%	3.1646
004.07	Fiber, ANKOM (%)	65	62	9.3986	0.96272	0.88187	0.29590	0.93019	9.32%	3.128%	9.83%	3.1436
005.00	Ash, 2h @ 600°C (%)	94	88	13.489	0.49679	0.41338	0.09817	0.42488	3.06%	0.726%	3.14%	4.3279
005.05	Ash, 3h @ 550°C (%)	33	28	13.909	0.42955	0.35694	0.09158	0.36850	2.56%	0.657%	2.64%	4.0240
005.99	Ash, Miscellaneous (%)	10	9	13.942	0.25397	0.25645	0.05196	0.26167	1.84%	0.373%	1.88%	5.0358
008.02	Fiber, Acid Detergent (%)	14	14	11.782	1.1581	1.1502	0.19123	1.1660	9.76%	1.623%	9.90%	6.0971
008.08	Fiber, Acid Detergent, ANKOM (%)	40	39	11.603	0.88851	0.64537	0.25459	0.69377	5.61%	2.212%	6.03%	2.7250
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	14	14	25.688	1.5284	1.5035	0.38849	1.5529	5.85%	1.512%	6.05%	3.9973
009.09	Fiber, Neutral Detergent, ANKOM (%)	43	42	24.612	1.2332	1.1974	0.35093	1.2478	4.87%	1.428%	5.08%	3.5556
010.99	Moisture, Miscellaneous (%)	23	21	8.9833	0.50923	0.40608	0.07730	0.41337	4.55%	0.867%	4.64%	5.3478
011.01	Loss on Drying, 135°C 2hr (%)	63	59	9.4785	0.34792	0.25318	0.09237	0.26951	2.66%	0.970%	2.83%	2.9178
012.00	Starch, Polarimetric (Ewers) (%)	11	11	20.626	0.56924	0.55397	0.18519	0.58411	2.69%	0.898%	2.83%	3.1541
013.00	Fat, Acid hydrolysis (%)	18	17	3.6863	0.70540	0.70714	0.11201	0.71596	19.01%	3.011%	19.24%	6.3920
013.02	Fat, Mojonier, Bak Ext (%)	15	15	4.4532	0.29838	0.27135	0.17552	0.32316	6.09%	3.941%	7.26%	1.8412
019.00	Calcium, Ox-MnO4 Vol. (%)	11	10	2.9106	0.06232	0.05036	0.04076	0.06478	1.72%	1.396%	2.22%	1.5895
019.31	Calcium, AAS, Dry ash (%)	21	20	2.9335	0.17685	0.12909	0.05343	0.13971	4.36%	1.805%	4.72%	2.6149
019.41	Calcium, ICP, Dry ash (%)	31	30	2.9467	0.15494	0.15482	0.04069	0.16008	5.25%	1.380%	5.43%	3.9342
019.42	Calcium, ICP, Open vessel (%)	23	22	2.9391	0.19211	0.15241	0.06535	0.16583	5.23%	2.241%	5.69%	2.5374
019.43	Calcium, ICP, Microwave (%)	26	24	2.9411	0.17222	0.14523	0.04533	0.15214	4.96%	1.547%	5.19%	3.3562
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	8	8	12.369	2.3939	2.3374	0.73137	2.4491	18.90%	5.913%	19.80%	3.3487

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
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	23	20	11.493	2.2835	1.0807	0.52160	1.2000	9.80%	4.728%	10.88%	2.3007
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	24	21	11.511	2.8672	0.75761	0.75991	1.0731	7.08%	7.103%	10.03%	1.4121
022.43	Copper, ICP, Microwave (mg / kg (ppm))	23	21	10.507	1.1661	0.82033	0.36761	0.89893	7.68%	3.442%	8.42%	2.4454
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	9	8	589.40	39.020	38.705	6.9901	39.331	6.57%	1.186%	6.67%	5.6268
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	23	20	581.72	56.761	39.732	12.642	41.695	6.71%	2.136%	7.04%	3.2982
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	20	18	517.96	135.62	138.75	14.731	139.53	26.67%	2.831%	26.82%	9.4718
025.43	Iron, ICP, Microwave (mg / kg (ppm))	21	20	594.31	34.100	28.468	20.660	35.174	4.81%	3.494%	5.95%	1.7025
027.31	Magnesium, AAS, Dry ash (%)	16	15	0.58430	0.02541	0.02389	0.01222	0.02683	4.09%	2.091%	4.59%	2.1964
027.41	Magnesium, ICP, Dry ash (%)	26	24	0.58661	0.02914	0.02452	0.00684	0.02546	4.21%	1.173%	4.37%	3.7215
027.42	Magnesium, ICP, Open vessel (%)	21	18	0.59550	0.03790	0.01928	0.01236	0.02290	3.24%	2.075%	3.84%	1.8526
027.43	Magnesium, ICP, Microwave (%)	24	23	0.58299	0.03126	0.03140	0.00755	0.03229	5.39%	1.296%	5.54%	4.2773
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	11	10	327.27	20.396	19.361	6.0903	20.296	5.96%	1.875%	6.25%	3.3326
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	24	23	307.03	39.360	24.895	10.627	27.068	7.95%	3.393%	8.64%	2.5471
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	22	18	329.16	25.927	20.720	6.2014	21.628	6.33%	1.896%	6.61%	3.4877
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	24	22	330.07	18.719	16.708	5.7507	17.670	5.09%	1.753%	5.39%	3.0727
031.01	Phosphorus, Photometric (%)	37	34	1.0491	0.07049	0.04325	0.01503	0.04578	4.09%	1.421%	4.33%	3.0470
031.41	Phosphorus, ICP, Dry ash (%)	29	28	1.0625	0.05644	0.04451	0.01501	0.04697	4.16%	1.404%	4.39%	3.1292
031.42	Phosphorus, ICP, Open vessel (%)	24	23	1.0636	0.05823	0.05462	0.02529	0.06019	5.15%	2.385%	5.68%	2.3798
031.43	Phosphorus, ICP, Microwave (%)	26	25	1.0694	0.05342	0.05202	0.01719	0.05478	4.86%	1.607%	5.12%	3.1872
032.31	Potassium, AAS, Dry ash (%)	13	11	1.1666	0.24586	0.09223	0.01926	0.09422	7.47%	1.560%	7.63%	4.8925
032.41	Potassium, ICP, Dry ash (%)	26	23	1.1977	0.05091	0.04307	0.02023	0.04759	3.61%	1.697%	3.99%	2.3522
032.42	Potassium, ICP, Open vessel (%)	23	21	1.2276	0.07920	0.05466	0.02252	0.05912	4.48%	1.848%	4.85%	2.6249
032.43	Potassium, ICP, Microwave (%)	24	23	1.2103	0.08545	0.06309	0.02013	0.06622	5.26%	1.679%	5.53%	3.2902
033.00	Salt as chloride, Sol Cl (%)	22	20	3.1755	0.15228	0.10482	0.04835	0.11543	3.33%	1.534%	3.66%	2.3876
033.01	Salt as chloride, Poten Cl (%)	34	29	3.2675	0.08067	0.05842	0.02035	0.06186	1.79%	0.625%	1.90%	3.0399
033.99	Salt, Miscellaneous (%)	10	10	3.0441	0.43144	0.43044	0.04152	0.43244	14.14%	1.364%	14.21%	10.415
035.31	Sodium, AAS, Dry ash (%)	12	9	0.85881	0.26660	0.07996	0.00780	0.08034	8.64%	0.842%	8.68%	10.304
035.41	Sodium, ICP, Dry ash (%)	26	24	0.89582	0.13873	0.05030	0.01589	0.05275	5.39%	1.704%	5.66%	3.3198
035.42	Sodium, ICP, Open vessel (%)	18	18	0.94851	0.04976	0.04579	0.02755	0.05344	4.83%	2.905%	5.63%	1.9398
035.43	Sodium, ICP, Microwave (%)	21	19	0.92241	0.05960	0.04986	0.01472	0.05199	5.35%	1.580%	5.58%	3.5309
036.42	Sulfur, ICP, Open vessel (%)	18	16	0.33321	0.02643	0.01992	0.00808	0.02149	6.05%	2.455%	6.53%	2.6605
036.43	Sulfur, ICP, Microwave (%)	13	11	0.33058	0.02740	0.02001	0.00410	0.02043	6.11%	1.250%	6.23%	4.9873
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	13	12	339.49	45.688	7.8512	10.820	13.368	2.23%	3.075%	3.80%	1.2355
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	25	22	331.37	45.685	25.970	9.2916	27.582	7.65%	2.738%	8.13%	2.9685
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	22	17	346.86	30.604	26.446	9.9473	28.255	7.55%	2.838%	8.06%	2.8405
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	23	20	348.27	29.151	21.317	7.5762	22.623	6.22%	2.212%	6.60%	2.9861
106.02	Vitamin A, LC (KU / kg)	24	23	60.726	14.317	13.405	7.9854	15.603	21.96%	13.079%	25.56%	1.9539
109.02	Vitamin E, LC (IU/kg)	16	13	249.12	39.133	29.203	8.0134	30.282	11.37%	3.119%	11.79%	3.7790
120.00	Alanine, Post-col Ninhydrin Der (%)	19	16	0.85276	0.04086	0.02389	0.00638	0.02473	2.83%	0.755%	2.93%	3.8749
121.00	Arginine, Post-col Ninhydrin Der (%)	19	17	1.0766	0.04851	0.03230	0.01019	0.03387	3.02%	0.954%	3.17%	3.3245

Test Material Code # 201731

Issue Date : 12/31/2017

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
122.00	Aspartic, Post-col Ninhydrin Der (%)	19	18	1.4464	0.07744	0.05124	0.01939	0.05478	3.58%	1.353%	3.82%	2.8261
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	19	16	0.30298	0.02529	0.01983	0.00440	0.02031	6.63%	1.473%	6.80%	4.6137
125.00	Glutamic, Post-col Ninhydrin Der (%)	19	16	2.9314	0.19089	0.10906	0.02037	0.11095	3.79%	0.707%	3.85%	5.4471
126.00	Glycine, Post-col Ninhydrin Der (%)	19	16	0.84602	0.04283	0.02412	0.00430	0.02450	2.89%	0.514%	2.93%	5.7024
127.00	Histidine, Post-col Ninhydrin Der (%)	19	19	0.43244	0.02163	0.02091	0.00781	0.02232	4.84%	1.807%	5.16%	2.8567
128.00	Isoleucine, Post-col Ninhydrin Der (%)	19	17	0.60494	0.04610	0.03481	0.00725	0.03556	5.67%	1.181%	5.79%	4.9038
129.00	Leucine, Post-col Ninhydrin Der (%)	19	16	1.2451	0.05953	0.02562	0.00886	0.02711	2.08%	0.720%	2.20%	3.0596
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	18	0.79467	0.05634	0.03817	0.01211	0.04005	4.75%	1.506%	4.98%	3.3062
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	17	0.24947	0.01702	0.01106	0.00626	0.01271	4.43%	2.507%	5.09%	2.0295
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	19	16	0.74432	0.04247	0.02070	0.01237	0.02412	2.77%	1.657%	3.23%	1.9492
133.00	Proline, Post-col Ninhydrin Der (%)	19	17	0.98740	0.06733	0.05095	0.02048	0.05492	5.23%	2.101%	5.63%	2.6810
134.00	Serine, Post-col Ninhydrin Der (%)	19	16	0.78668	0.05402	0.02496	0.00872	0.02644	3.17%	1.107%	3.36%	3.0326
135.00	Threonine, Post-col Ninhydrin Der (%)	19	16	0.60891	0.03741	0.02537	0.00549	0.02596	4.21%	0.910%	4.30%	4.7283
137.00	Tyrosine, Post-col Ninhydrin Der (%)	14	11	0.48656	0.08954	0.04011	0.00691	0.04070	7.96%	1.370%	8.07%	5.8931
138.00	Valine, Post-col Ninhydrin Der (%)	19	17	0.76772	0.04081	0.02895	0.00798	0.03003	3.74%	1.030%	3.88%	3.7652
361.03	Lasalocid sodium, LC (UV or FL) (mg/kg (ppm))	14	12	26.970	2.9450	1.4565	0.89887	1.7116	5.55%	3.427%	6.53%	1.9041

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