

Animal Feed Scheme
Dairy Beef Feed, Medicated
Test Material Code # 201728

Method Summary Report
(Precision Report Follows)

Methods Reported: 406
Labs Reporting: 193
Issue Date : 09/30/2017

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 (%)	7	7	8.2679	4.1880	8.2679	4.7492	2.2438	57.44%	0.13571	2.91%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	8	8	7.0516	0.73488	6.9918	0.68974	0.30482	9.86%	0.10825	2.98%
001.03	Loss on Drying, Low temp. methods (%)	5	4	7.0300	0.12124	7.0300	0.12124	0.06062	1.72%	0.01000	2.98%
001.05	Loss on Drying, LECO (%)	2	2	6.9800	0.21213						
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	38	38	7.0581	0.43852	7.0807	0.25482	0.05167	3.60%	0.09897	2.98%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	2	2	7.3850	0.09192						
001.99	Loss on Drying, Miscellaneous (%)	19	18	7.0978	0.52319	7.1527	0.46083	0.13577	6.44%	0.07511	2.97%
002.00	Protein, Crude (%)	3	3	34.575	0.36170	34.575	0.36170	0.20883	1.05%	0.11000	1.70%
002.01	Protein, Auto Kjel-Foss (%)	10	9	34.299	0.36341	34.301	0.39963	0.16651	1.17%	0.10011	1.71%
002.02	Protein, Semiauto Autoanalyzer (%)	4	4	34.373	0.26411	34.373	0.26411	0.13206	0.77%	0.12358	1.71%
002.03	Protein, Hach Method (%)	1	1	35.735							
002.04	Protein, Copper Catalyst (%)	5	4	35.095	2.0026	35.095	2.0026	1.0013	5.71%	0.16000	1.69%
002.05	Protein, Copper, Boric Acid (%)	29	28	34.267	0.50997	34.272	0.53592	0.12660	1.56%	0.15639	1.71%
002.06	Protein, Combustion Nitrogen Analyzer (%)	128	124	34.714	0.49493	34.698	0.33955	0.03812	0.98%	0.21699	1.70%
002.08	Protein, Cu/Ti (%)	2	2	33.918	0.53376						
002.10	Protein, Block dig/distillation (%)	1	1	33.220							
002.11	Protein, NIR (%)	5	5	38.987	2.6874	38.987	2.6874	1.2018	6.89%	0.13800	1.60%
002.99	Protein, Miscellaneous (%)	5	4	35.461	0.99140	35.461	0.99140	0.49570	2.80%	0.24750	1.68%
003.00	Fat, Eth Ext., Direct (%)	12	11	1.8445	1.0467	1.6016	0.40109	0.15117	25.04%	0.05877	3.73%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	1	1	1.3450							
003.06	Fat, Pet Ether (%)	18	16	1.6280	0.24521	1.6164	0.25191	0.07872	15.59%	0.04512	3.72%
003.09	Fat, Soxtec, Eth Ext (%)	19	18	1.6300	0.46326	1.6105	0.47847	0.14097	29.71%	0.04651	3.72%
003.10	Fat, Soxtec, Pet Ether (%)	31	30	1.2696	0.31051	1.2608	0.33084	0.07550	26.24%	0.08975	3.86%
003.11	Fat, NIR (%)	3	3	1.7933	0.62798	1.7933	0.62798	0.44405	35.02%	0.03333	3.66%
003.12	Fat, Hexane Ext (%)	4	3	1.1750	0.06764	1.1750	0.06764	0.03905	5.76%	0.01667	3.90%
003.13	Fat, Soxtec, Hexane Ext. (%)	8	8	1.4772	0.30410	1.4772	0.34484	0.15240	23.34%	0.08363	3.77%
003.14	Fat, Ankom (%)	42	40	1.6793	0.61527	1.5762	0.30890	0.06105	19.60%	0.07880	3.73%
003.99	Fat, Miscellaneous (%)	7	6	1.8167	0.66785	1.8167	0.75734	0.38648	41.69%	0.07333	3.66%
004.00	Fiber, Crude, Asbestos Free (%)	19	18	8.5277	0.46148	8.5223	0.50803	0.14968	5.96%	0.12115	2.90%
004.01	Fiber, Sing Filt (%)	1	1	9.3000							

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004.03	Fiber, Fritted Glass (%)	4	4	8.5616	1.7892	8.5616	1.7892	0.89460	20.90%	0.31083	2.90%
004.06	Fiber, Fibertec (%)	25	24	8.3404	0.41370	8.3456	0.38528	0.09831	4.62%	0.10979	2.91%
004.07	Fiber, ANKOM (%)	60	59	9.3753	2.0058	9.3679	1.3671	0.22248	14.59%	0.28426	2.86%
004.11	Fiber, NIR (%)	4	4	10.500	0.75896	10.500	0.75896	0.37948	7.23%	0.21500	2.81%
004.99	Fiber, Miscellaneous (%)	5	4	7.6363	0.23113	7.6363	0.23113	0.11557	3.03%	0.11250	2.95%
005.00	Ash, 2h @ 600°C (%)	94	93	25.598	1.2374	25.818	0.74823	0.09698	2.90%	0.24475	1.97%
005.02	Ash, LECO (%)	2	2	26.615	0.02121						
005.05	Ash, 3h @ 550°C (%)	29	29	26.203	0.51708	26.251	0.33962	0.07883	1.29%	0.20704	1.95%
005.11	Ash, NIR (%)	4	4	26.026	14.281	26.026	14.281	7.1405	54.87%	0.55250	1.96%
005.99	Ash, Miscellaneous (%)	10	10	26.362	0.52928	26.363	0.59761	0.23623	2.27%	0.29590	1.95%
006.00	Total sugars, As sucrose (%)	1	1	4.4100							
006.01	Total sugars, Mod. Fehling Soln (%)	1	1	5.5300							
006.99	Total sugars, Miscellaneous (%)	1	1	5.3500							
008.02	Fiber, Acid Detergent (%)	16	16	11.209	0.99035	11.288	0.91335	0.28542	8.09%	0.31211	2.78%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	12.550							
008.08	Fiber, Acid Detergent, ANKOM (%)	41	40	11.423	2.2651	11.343	1.1129	0.21996	9.81%	0.36196	2.78%
008.99	Fiber, Acid Detergent Miscellaneous (%)	3	3	11.207	0.41004	11.207	0.41004	0.23674	3.66%	0.26667	2.78%
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	20.330							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	13	13	20.660	1.5654	20.660	1.7752	0.61543	8.59%	0.38076	2.20%
009.09	Fiber, Neutral Detergent, ANKOM (%)	38	37	20.700	2.1191	20.494	1.7982	0.36953	8.77%	0.58979	2.21%
009.99	Fiber, Neutral Det Miscellaneous (%)	2	2	15.438	8.9626						
010.03	Moisture, Karl-Fischer (%)	3	3	6.8000	0.36814	6.8000	0.36814	0.21255	5.41%	0.56667	3.00%
010.11	Moisture, NIR (%)	3	3	7.0500	1.2428	7.0500	1.2428	0.87879	17.63%	0.10667	2.98%
010.99	Moisture, Miscellaneous (%)	21	20	7.3466	0.94451	7.1755	0.35084	0.09806	4.89%	0.14755	2.97%
011.01	Loss on Drying, 135°C 2hr (%)	66	65	8.3193	0.51285	8.3667	0.39555	0.06133	4.73%	0.11300	2.91%
011.02	Loss on Drying, 130°C for 2 hours (%)	3	3	8.3800	0.58264	8.3800	0.58264	0.33639	6.95%	0.08000	2.90%
011.99	Loss on Drying, High Temp. Methods Miscellaneous	3	3	8.7567	1.0035	8.7567	1.0035	0.57937	11.46%	0.24667	2.89%
012.00	Starch, Polarimetric (Ewers) (%)	7	6	5.4933	0.74186	5.4933	0.84127	0.42931	15.31%	0.10000	3.10%
012.01	Starch, Megazyme (%)	9	9	5.4467	1.3676	5.2107	0.90998	0.37916	17.46%	0.21623	3.12%
012.03	Starch, Enzymatic (%)	5	5	5.7990	0.94449	5.7990	0.94449	0.42239	16.29%	0.22200	3.07%
012.04	Starch, YSI Analyzer (%)	4	4	5.2725	0.79046	5.2725	0.79046	0.39523	14.99%	0.16500	3.11%
012.11	Starch, NIR (%)	1	1	3.5350							
013.00	Fat, Acid hydrolysis (%)	19	19	2.8792	1.0600	2.7430	0.75616	0.21684	27.57%	0.17964	3.44%
013.02	Fat, Mojonier, Bak Ext (%)	17	16	3.1811	0.85788	3.1509	0.90307	0.28221	28.66%	0.10128	3.37%
013.08	Fat, Roese-Gottlieb Modified (%)	1	1	2.0424							
013.10	Fat, Soxtec-Acid Hydrolysis (%)	6	6	1.9771	0.42627	1.9771	0.48339	0.24668	24.45%	0.08940	3.61%
013.13	Fat, Ankom- Acid Hydrolysis (%)	7	7	2.7267	0.72910	2.6206	0.42922	0.20279	16.38%	0.29139	3.46%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	4	4	344.77	60.862	344.77	60.862	30.431	17.65%	16.758	6.64%

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015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	124.80							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	8	8	280.80	38.279	280.80	43.408	19.184	15.46%	15.766	6.85%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	123.00							
015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	1	1	331.50							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	4	18.609	1.9157	18.609	1.9157	0.95785	10.29%	1.3275	10.30%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	5	5	16.487	2.5743	16.487	2.5743	1.1513	15.61%	0.58538	10.49%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	6	5	14.276	4.5902	14.276	4.5902	2.5660	32.15%	0.47600	10.72%
019.00	Calcium, Ox-Mn04 Vol. (%)	8	8	6.8357	0.11941	6.8486	0.10360	0.04579	1.51%	0.05813	2.99%
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	7.2459							
019.08	Calcium, EDTA (%)	8	7	6.9880	0.34353	6.9880	0.38957	0.18405	5.57%	0.03863	2.99%
019.09	Calcium, Ion-selective electrode (%)	1	1	6.6295							
019.31	Calcium, AAS, Dry ash (%)	23	23	6.8327	0.85800	6.9407	0.36771	0.09584	5.30%	0.17601	2.99%
019.32	Calcium, AAS, Open vessel (%)	3	3	6.8750	0.28831	6.8750	0.28831	0.16646	4.19%	0.28333	2.99%
019.33	Calcium, AAS, Microwave (%)	2	2	7.3400	0.22627						
019.41	Calcium, ICP, Dry ash (%)	28	28	6.9935	0.37848	7.0024	0.36524	0.08628	5.22%	0.12778	2.98%
019.42	Calcium, ICP, Open vessel (%)	21	21	6.4353	1.7967	6.8136	0.68934	0.18803	10.12%	0.26980	3.00%
019.43	Calcium, ICP, Microwave (%)	26	24	6.8642	0.41847	6.8648	0.47313	0.12072	6.89%	0.09208	2.99%
019.44	Calcium, ICP, Dry ash (%)	2	2	6.6525	0.32173						
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	6.8850							
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	6.8028	0.48600	6.8028	0.48600	0.28059	7.14%	0.13523	3.00%
019.53	Calcium, ICP-MS, Microwave (%)	3	3	7.1500	0.67700	7.1500	0.67700	0.39087	9.47%	0.30667	2.97%
019.99	Calcium, Miscellaneous (%)	6	6	6.7642	0.12749	6.7859	0.09049	0.04618	1.33%	0.07833	3.00%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	4	4	11.503	1.1544	11.503	1.1544	0.57720	10.04%	0.81000	11.08%
021.32	Cobalt, AAS, Open vessel (mg / kg (ppm))	1	1	11.400							
021.33	Cobalt, AAS, Microwave (mg / kg (ppm))	1	1	9.1000							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	5	5	8.8198	2.7975	8.8198	2.7975	1.2511	31.72%	0.21010	11.53%
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	5	5	9.6384	0.98546	9.6384	0.98546	0.44071	10.22%	0.70262	11.37%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	10	9	10.380	1.3083	10.380	1.4837	0.61819	14.29%	0.21327	11.25%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	3	3	9.2683	1.8072	9.2683	1.8072	1.0434	19.50%	0.49000	11.44%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	3	3	11.347	1.1940	11.347	1.1940	0.68936	10.52%	0.47253	11.10%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	15	14	474.96	17.961	474.56	19.491	6.5115	4.11%	9.7284	6.33%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	1	1	520.50							
022.33	Copper, AAS, Microwave (mg / kg (ppm))	3	3	481.24	31.751	481.24	31.751	18.331	6.60%	16.426	6.31%
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	25	25	455.51	58.784	466.70	31.544	7.8860	6.76%	11.788	6.34%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	23	21	461.00	85.306	476.95	20.820	5.6791	4.37%	11.005	6.32%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	25	25	477.87	26.602	479.24	26.913	6.7282	5.62%	11.164	6.32%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	1	1	505.00							
022.51	Copper, ICP-MS, Dry ash (mg / kg (ppm))	1	1	464.15							

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022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	2	2	389.50	108.19						
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	3	3	488.33	10.104	488.33	10.104	5.8335	2.07%	21.333	6.30%
022.99	Copper, Miscellaneous (mg / kg (ppm))	5	5	480.96	13.973	480.96	13.973	6.2489	2.91%	16.448	6.31%
024.01	Iodine, Elm-Cald (mg / kg (ppm))	1	1	20.000							
024.03	Iodine, Ion-selective electrode (mg / kg (ppm))	1	1	9.2000							
024.52	Iodine, ICP-MS, Open vessel (mg / kg (ppm))	1	1	12.500							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	14	13	703.20	50.259	701.86	54.007	18.724	7.69%	19.186	5.97%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	1	1	701.00							
025.33	Iron, AAS, Microwave (mg / kg (ppm))	1	1	867.94							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	21	21	709.81	71.265	714.95	60.806	16.586	8.50%	33.345	5.95%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	17	17	584.45	171.91	592.65	176.74	53.582	29.82%	54.139	6.12%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	23	22	666.22	88.157	672.95	79.686	21.236	11.84%	16.787	6.00%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	2	2	332.63	88.569						
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	1	1	750.50							
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	686.00	57.617	686.00	57.617	33.265	8.40%	47.333	5.99%
027.31	Magnesium, AAS, Dry ash (%)	17	17	0.69263	0.09910	0.71373	0.04296	0.01302	6.02%	0.01512	4.21%
027.32	Magnesium, AAS, Open vessel (%)	3	3	0.71617	0.04908	0.71617	0.04908	0.02834	6.85%	0.00500	4.21%
027.33	Magnesium, AAS, Microwave (%)	2	2	0.58200	0.00283						
027.41	Magnesium, ICP, Dry ash (%)	25	24	0.73189	0.03334	0.72913	0.02782	0.00710	3.82%	0.01255	4.19%
027.42	Magnesium, ICP, Open vessel (%)	21	20	0.67558	0.15160	0.71207	0.05027	0.01405	7.06%	0.02006	4.21%
027.43	Magnesium, ICP, Microwave (%)	25	24	0.71486	0.03729	0.71419	0.03988	0.01017	5.58%	0.01888	4.21%
027.44	Magnesium, ICP, Dry ash (%)	2	2	0.72425	0.04066						
027.51	Magnesium, ICP-MS, Dry ash (%)	1	1	0.68500							
027.52	Magnesium, ICP-MS, Open vessel (%)	3	3	0.69253	0.03508	0.69253	0.03508	0.02025	5.07%	0.00553	4.23%
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.77675	0.01025						
027.99	Magnesium, Miscellaneous (%)	4	3	0.74000	0.04359	0.74000	0.04359			0.00000	4.19%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	14	14	419.88	26.242	419.88	29.758	9.9414	7.09%	9.0568	6.45%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	1	1	462.00							
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	2	2	367.36	26.597						
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	23	22	411.79	56.936	421.19	38.787	10.337	9.21%	10.735	6.44%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	22	22	402.26	106.74	423.59	44.307	11.808	10.46%	18.264	6.44%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	25	25	430.54	21.209	430.18	22.914	5.7285	5.33%	12.251	6.42%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	1	1	446.50							
028.51	Manganese, ICP-MS, Dry ash (mg / kg (ppm))	1	1	432.00							
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	2	2	414.20	45.679						
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	2	2	457.75	2.4749						
028.99	Manganese, Miscellaneous (mg / kg (ppm))	5	5	434.07	27.338	434.07	27.338	12.226	6.30%	8.6000	6.41%
031.00	Phosphorus, Vol (%)	1	1	0.62500							

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031.01	Phosphorus, Photometric (%)	33	33	0.61845	0.02812	0.61498	0.02120	0.00461	3.45%	0.01840	4.30%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	3	3	0.62780	0.00752	0.62780	0.00752	0.00532	1.20%	0.00347	4.29%
031.03	Phosphorus, Autoanalyzer (%)	3	3	0.58892	0.03479	0.58892	0.03479	0.02009	5.91%	0.00243	4.33%
031.06	Phosphorus, Hach Method (%)	1	1	0.59500							
031.41	Phosphorus, ICP, Dry ash (%)	28	27	0.60800	0.04581	0.60942	0.04197	0.01010	6.89%	0.01137	4.31%
031.42	Phosphorus, ICP, Open vessel (%)	23	22	0.60564	0.05190	0.60713	0.05551	0.01479	9.14%	0.02992	4.31%
031.43	Phosphorus, ICP, Microwave (%)	28	27	0.59760	0.04226	0.59867	0.04357	0.01048	7.28%	0.01172	4.32%
031.44	Phosphorus, ICP, Dry ash (%)	2	2	0.62550	0.01697						
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.56458	0.01496						
031.53	Phosphorus, ICP-MS, Microwave (%)	3	3	0.63833	0.04768	0.63833	0.04768	0.02753	7.47%	0.02333	4.28%
031.99	Phosphorus, Miscellaneous (%)	7	7	0.59929	0.04843	0.60436	0.04258	0.02012	7.05%	0.01286	4.31%
032.31	Potassium, AAS, Dry ash (%)	17	16	2.3253	0.20659	2.3571	0.12778	0.03993	5.42%	0.03599	3.52%
032.32	Potassium, AAS, Open vessel (%)	3	3	2.4367	0.25915	2.4367	0.25915	0.14962	10.64%	0.05333	3.50%
032.33	Potassium, AAS, Microwave (%)	1	1	1.3500							
032.41	Potassium, ICP, Dry ash (%)	25	25	2.4196	0.10747	2.4219	0.11125	0.02781	4.59%	0.04104	3.50%
032.42	Potassium, ICP, Open vessel (%)	22	22	2.3211	0.48094	2.4086	0.21463	0.05720	8.91%	0.07708	3.50%
032.43	Potassium, ICP, Microwave (%)	29	28	2.3578	0.14806	2.3779	0.09417	0.02225	3.96%	0.05180	3.51%
032.44	Potassium, ICP, Dry ash (%)	2	2	2.4075	0.14496						
032.51	Potassium, ICP-MS, Dry ash (%)	1	1	2.4000							
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	2.3240	0.02270						
032.53	Potassium, ICP-MS, Microwave (%)	2	2	2.5250	0.07778						
032.99	Potassium, Miscellaneous (%)	2	2	2.3325	0.03182						
033.00	Salt as chloride, Sol Cl (%)	22	20	3.8901	0.17149	3.9173	0.12536	0.03504	3.20%	0.02591	3.26%
033.01	Salt as chloride, Poten Cl (%)	32	31	4.0106	0.13980	3.9980	0.07485	0.01681	1.87%	0.04384	3.25%
033.03	Salt as chloride, Quantab (%)	4	3	3.8133	0.17926	3.8133	0.17926	0.12676	4.70%	0.02000	3.27%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	3.8350	0.14858	3.8350	0.14858	0.08578	3.87%	0.01000	3.27%
033.99	Salt, Miscellaneous (%)	10	9	3.6041	0.97835	3.6274	1.0570	0.44043	29.14%	0.04878	3.29%
034.04	Selenium, AA, Hydride (mg / kg (ppm))	5	5	4.4340	0.74489	4.4340	0.74489	0.33312	16.80%	0.12400	12.78%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	2	2	3.0250	1.0253						
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1	1	3.8000							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	5	4	5.2783	1.0034	5.2783	1.0034	0.50170	19.01%	0.28040	12.45%
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	5	5	4.5282	0.82411	4.5282	0.82411	0.36855	18.20%	0.26240	12.74%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	4	3	5.1042	0.49694	5.1042	0.49694	0.28691	9.74%	0.12467	12.52%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	4.4200							
035.01	Sodium, Ion-selective electrode (%)	3	3	0.79767	0.03792	0.79767	0.03792	0.02681	4.75%	0.00400	4.14%
035.02	Sodium, Em Spect (%)	1	1	0.76000							
035.05	Sodium, Flame Emission (%)	2	2	0.69750	0.27931						
035.31	Sodium, AAS, Dry ash (%)	15	15	0.81063	0.08873	0.79842	0.05543	0.01789	6.94%	0.01357	4.14%

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035.32	Sodium, AAS, Open vessel (%)	2	2	0.77000	0.04950						
035.33	Sodium, AAS, Microwave (%)	2	2	0.93000	0.15556						
035.41	Sodium, ICP, Dry ash (%)	25	25	0.82004	0.05679	0.81992	0.05814	0.01453	7.09%	0.02249	4.12%
035.42	Sodium, ICP, Open vessel (%)	17	17	0.78992	0.13006	0.81447	0.06137	0.01861	7.53%	0.03094	4.13%
035.43	Sodium, ICP, Microwave (%)	24	24	0.78130	0.04392	0.78299	0.04563	0.01164	5.83%	0.01700	4.15%
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.80065	0.01223						
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.88650	0.03465						
035.99	Sodium, Miscellaneous (%)	3	3	0.81333	0.02517	0.81333	0.02517	0.01453	3.09%	0.01333	4.13%
036.04	Sulfur, LECO (%)	4	4	0.58375	0.04385	0.58375	0.04385	0.02193	7.51%	0.01750	4.34%
036.42	Sulfur, ICP, Open vessel (%)	20	19	0.61663	0.10668	0.62362	0.07770	0.02228	12.46%	0.02153	4.29%
036.43	Sulfur, ICP, Microwave (%)	15	15	0.62336	0.04377	0.62234	0.04668	0.01507	7.50%	0.01732	4.30%
036.52	Sulfur, ICP-MS, Open vessel (%)	2	2	2,759.6	3,901.7						
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.63600							
036.99	Sulfur, Miscellaneous (%)	1	1	0.66000							
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	16	16	1,243.7	147.25	1,245.8	87.182	27.244	7.00%	28.370	5.47%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	1	1	1,159.5							
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	3	3	1,198.7	131.97	1,198.7	131.97	76.193	11.01%	4.7683	5.50%
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	24	23	1,158.3	162.41	1,190.5	70.962	18.496	5.96%	35.091	5.51%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	21	20	1,048.6	401.47	1,161.3	165.24	46.186	14.23%	26.787	5.53%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	24	24	1,196.7	118.27	1,193.3	94.875	24.208	7.95%	36.871	5.51%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	2	2	1,198.1	97.722						
037.51	Zinc, ICP-MS, Dry ash (mg / kg (ppm))	1	1	1,101.5							
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	2	2	893.45	331.70						
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	3	3	1,252.3	118.09	1,252.3	118.09	68.179	9.43%	41.333	5.47%
037.99	Zinc, Miscellaneous (mg / kg (ppm))	5	5	1,183.8	66.436	1,183.8	66.436	29.711	5.61%	18.994	5.51%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	2	2	2.9875	0.53387						
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	4	4	3.1702	0.49253	3.1702	0.49253	0.24627	15.54%	0.25420	13.45%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	9	8	3.2008	0.36648	3.2310	0.34309	0.15163	10.62%	0.11820	13.41%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	2	2	2.7350	0.05657						
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	4	4	3.3533	0.46642	3.3533	0.46642	0.23321	13.91%	0.24063	13.33%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	11.980							
040.43	Barium, ICP, Microwave (mg / kg (ppm))	1	1	11.955							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	10.016							
041.43	Vanadium, ICP, Microwave (mg / kg (ppm))	1		0.00000							
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	2	2	1.7425	0.29345						
042.00	Chloride, Titrimetric (%)	2	2	2.5025	0.07425						
042.02	Chloride, Ion Chromatography (%)	1	1	2.3200							
101.00	Choline Chloride, Microbiological (mg / kg (ppm))	2	2	2,033.7	252.68						

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101.01	Choline Chloride, Chem (mg / kg (ppm))	2	2	1,900.5	170.41						
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	941.00							
101.99	Choline Chloride, Miscellaneous (mg / kg (ppm))	1	1	923.50							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	716.50							
102.02	Niacin, LC (mg / kg (ppm))	2	2	437.12	270.28						
102.99	Niacin, Miscellaneous (mg / kg (ppm))	1	1	679.57							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	9.7200							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	12.700							
104.03	Riboflavin, LC (mg / kg (ppm))	3	3	2.1133	0.51588	2.1133	0.51588	0.29784	24.41%	0.10000	14.29%
104.99	Riboflavin, Miscellaneous (mg / kg (ppm))	1	1	2.1050							
105.00	Thiamine, LC (mg / kg (ppm))	2	2	22.208	5.6392						
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	27.700							
105.99	Thiamine, Miscellaneous (mg / kg (ppm))	1	1	28.855							
106.00	Vitamin A, Color (KU / kg)	3	3	22.072	1.4462	22.072	1.4462	0.83496	6.55%	0.54187	
106.01	Vitamin A, UV (KU / kg)	1	1	21.650							
106.02	Vitamin A, LC (KU / kg)	20	19	22.969	8.9144	22.878	6.7073	1.9235	29.32%	3.9767	
106.99	Vitamin A, Miscellaneous (KU / kg)	2	2	30.808	8.2908						
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	17.100							
108.02	Vitamin D3, LC (KU / kg)	4	4	4.4113	0.87285	4.4113	0.87285	0.43643	19.79%	0.54750	
108.99	Vitamin D3, Miscellaneous (KU / kg)	2	2	3.5925	0.78842						
109.02	Vitamin E, LC (IU/kg)	15	15	423.49	108.32	442.76	50.731	16.373	11.46%	26.817	
109.99	Vitamin E, Miscellaneous (IU/kg)	2	2	478.04	48.847						
112.01	Pyridoxine, LC (µg / g)	1	1	4.4750							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.0400							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	0.32450							
115.00	Non Protein N (NPN), Urea + Am, Urease method	4	3	1.6410	0.55583	1.6410	0.55583	0.39303	33.87%	0.04933	3.71%
115.01	Non Protein N (NPN), Automated (%)	1	1	5.6265							
115.99	Non Protein N (NPN), Miscellaneous (%)	4	4	1.6922	0.77984	1.6922	0.77984	0.38992	46.08%	0.03935	3.70%
120.00	Alanine, Post-col Ninhydrin Der (%)	21	20	0.95472	0.04331	0.95095	0.04061	0.01135	4.27%	0.01054	4.03%
120.01	Alanine, Pre-col OPA Der (%)	1	1	0.81500							
120.02	Alanine, Post-col OPA Der (%)	1	1	0.94000							
120.05	Alanine, Pre-col AQC Der (%)	2	2	0.85825	0.02722						
120.99	Alanine, Miscellaneous (%)	2	2	1.4445	0.83368						
121.00	Arginine, Post-col Ninhydrin Der (%)	20	19	1.3633	0.06167	1.3554	0.04626	0.01327	3.41%	0.02147	3.82%
121.01	Arginine, Pre-col OPA Der (%)	1	1	1.3075							
121.02	Arginine, Post-col OPA Der (%)	1	1	1.3180							
121.05	Arginine, Pre-col AQC Der (%)	2	2	1.3070	0.08202						
121.99	Arginine, Miscellaneous (%)	2	2	1.9753	0.72160						

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122.00	Aspartic, Post-col Ninhydrin Der (%)	21	21	1.9190	0.06750	1.9075	0.04547	0.01240	2.38%	0.03930	3.63%
122.01	Aspartic, Pre-col OPA Der (%)	1	1	1.8070							
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.9020							
122.05	Aspartic, Pre-col AQC Der (%)	2	2	1.8250	0.05020						
122.99	Aspartic, Miscellaneous (%)	2	2	1.3965	0.66256						
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin (%)	21	21	0.35294	0.03360	0.35485	0.02026	0.00553	5.71%	0.00716	4.67%
124.01	Cysteine/Cystine, PAO Pre-col OPA Der (%)	1	1	0.31550							
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.34450							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	2	2	0.34450	0.00354						
124.99	Cysteine/Cystine, Miscellaneous (%)	2	2	0.34500	0.05657						
125.00	Glutamic, Post-col Ninhydrin Der (%)	21	21	3.6194	0.17245	3.6061	0.13202	0.03601	3.66%	0.07472	3.30%
125.01	Glutamic, Pre-col OPA Der (%)	1	1	3.6140							
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.6230							
125.05	Glutamic, Pre-col AQC Der (%)	2	2	3.4903	0.00177						
125.99	Glutamic, Miscellaneous (%)	2	2	3.6480	0.33658						
126.00	Glycine, Post-col Ninhydrin Der (%)	21	20	0.96961	0.03820	0.96322	0.02162	0.00604	2.24%	0.01336	4.02%
126.01	Glycine, Pre-col OPA Der (%)	1	1	0.92500							
126.02	Glycine, Post-col OPA Der (%)	1	1	0.95500							
126.05	Glycine, Pre-col AQC Der (%)	2	2	0.93375	0.02015						
126.99	Glycine, Miscellaneous (%)	2	2	1.3295	0.67104						
127.00	Histidine, Post-col Ninhydrin Der (%)	20	19	0.50397	0.02789	0.49941	0.01502	0.00431	3.01%	0.00719	4.44%
127.01	Histidine, Pre-col OPA Der (%)	1	1	0.43050							
127.02	Histidine, Post-col OPA Der (%)	1	1	0.47700							
127.05	Histidine, Pre-col AQC Der (%)	2	2	0.46625	0.01237						
127.99	Histidine, Miscellaneous (%)	2	2	0.78175	0.55402						
128.00	Isoleucine, Post-col Ninhydrin Der (%)	21	21	0.81215	0.04731	0.81024	0.04910	0.01339	6.06%	0.01967	4.13%
128.01	Isoleucine, Pre-col OPA Der (%)	1	1	0.83550							
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.80200							
128.05	Isoleucine, Pre-col AQC Der (%)	2	2	0.73025	0.04985						
128.99	Isoleucine, Miscellaneous (%)	2	2	1.2950	0.70711						
129.00	Leucine, Post-col Ninhydrin Der (%)	21	20	1.4496	0.05629	1.4448	0.04640	0.01297	3.21%	0.01503	3.78%
129.01	Leucine, Pre-col OPA Der (%)	1	1	1.4605							
129.02	Leucine, Post-col OPA Der (%)	1	1	1.4370							
129.05	Leucine, Pre-col AQC Der (%)	2	2	1.4243	0.03500						
129.99	Leucine, Miscellaneous (%)	2	2	2.4165	1.7699						
130.00	L-Lysine, Post-col Ninhydrin Der (%)	21	21	1.0197	0.05966	1.0106	0.04203	0.01146	4.16%	0.01758	3.99%
130.01	L-Lysine, Pre-col OPA Der (%)	1	1	0.99750							
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.97300							

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130.05	L-Lysine, Pre-col AQC Der (%)	2	2	0.98675	0.02227						
130.99	L-Lysine, Miscellaneous (%)	3	3	1.5242	0.75334	1.5242	0.75334	0.53269	49.43%	0.14300	3.75%
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	21	21	0.26805	0.01722	0.26765	0.01867	0.00509	6.97%	0.00928	4.88%
131.01	Methionine, PAO Pre-col OPA Der (%)	1	1	0.21450							
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.25100							
131.05	Methionine, PAO Pre-col AQC Der (%)	1	1	0.23700							
131.99	Methionine, Miscellaneous (%)	3	3	0.47317	0.25202	0.47317	0.25202	0.14550	53.26%	0.02967	4.48%
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	21	20	0.93693	0.03959	0.93525	0.04081	0.01141	4.36%	0.01740	4.04%
132.01	Phenylalanine, Pre-col OPA Der (%)	1	1	0.93500							
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.89900							
132.05	Phenylalanine, Pre-col AQC Der (%)	2	2	0.88425	0.03854						
132.99	Phenylalanine, Miscellaneous (%)	2	2	1.5048	0.79161						
133.00	Proline, Post-col Ninhydrin Der (%)	19	19	1.1518	0.07300	1.1490	0.07632	0.02189	6.64%	0.04111	3.92%
133.05	Proline, Pre-col AQC Der (%)	2	2	1.1478	0.02722						
133.99	Proline, Miscellaneous (%)	2	2	2.0363	1.2463						
134.00	Serine, Post-col Ninhydrin Der (%)	21	21	0.95805	0.03832	0.95729	0.03557	0.00970	3.72%	0.02298	4.03%
134.01	Serine, Pre-col OPA Der (%)	1	1	0.98550							
134.02	Serine, Post-col OPA Der (%)	1	1	0.89950							
134.05	Serine, Pre-col AQC Der (%)	2	2	0.97675	0.07177						
134.99	Serine, Miscellaneous (%)	2	2	1.2710	0.72266						
135.00	Threonine, Post-col Ninhydrin Der (%)	22	22	0.79318	0.05841	0.78977	0.03118	0.00831	3.95%	0.01640	4.14%
135.01	Threonine, Pre-col OPA Der (%)	1	1	0.76400							
135.02	Threonine, Post-col OPA Der (%)	1	1	0.77400							
135.05	Threonine, Pre-col AQC Der (%)	2	2	0.78125	0.02581						
135.99	Threonine, Miscellaneous (%)	3	3	0.95250	0.35362	0.95250	0.35362	0.20416	37.13%	0.03700	4.03%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	7	7	0.23959	0.04118	0.23959	0.04670	0.02206	19.49%	0.01007	4.96%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	3	3	0.24450	0.02883	0.24450	0.02883	0.01665	11.79%	0.00700	4.94%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.24900							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	4	4	0.26363	0.00375	0.26363	0.00375	0.00188	1.42%	0.00625	4.89%
136.99	Tryptophan, Miscellaneous (%)	1	1	0.27000							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	15	15	0.57202	0.13452	0.60197	0.07554	0.02438	12.55%	0.02561	4.32%
137.01	Tyrosine, Pre-col OPA Der (%)	1	1	0.59750							
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.58850							
137.05	Tyrosine, Pre-col AQC Der (%)	2	2	0.62625	0.04561						
137.99	Tyrosine, Miscellaneous (%)	2	2	1.0625	0.56922						
138.00	Valine, Post-col Ninhydrin Der (%)	21	20	0.97325	0.04427	0.97289	0.04922	0.01376	5.06%	0.02046	4.02%
138.01	Valine, Pre-col OPA Der (%)	1	1	1.0560							
138.02	Valine, Post-col OPA Der (%)	1	1	0.98500							

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138.05	Valine, Pre-col AQC Der (%)	2	2	0.92500	0.06505						
138.99	Valine, Miscellaneous (%)	2	2	1.3253	0.55190						
139.02	Taurine, Post-col OPA Der (%)	1		0.00000							
160.99	Fructose, Miscellaneous (%)	6	6	0.21158	0.05967	0.21158	0.06766	0.03453	31.98%	0.03650	5.05%
161.99	Galactose, Miscellaneous (%)	1		0.00000							
162.99	Glucose, Miscellaneous (%)	5	3	0.11500	0.04951	0.11500	0.04951	0.02858	43.05%	0.04733	5.54%
163.99	Lactose, Miscellaneous (%)	4									
164.99	Maltose, Miscellaneous (%)	3	1								
165.99	Sucrose, Miscellaneous (%)	7	6	2.8392	0.13684	2.8392	0.15517	0.07919	5.47%	0.10167	3.42%
166.99	Raffinose, Miscellaneous (%)	3	3	0.67500	0.10282	0.67500	0.10282	0.05936	15.23%	0.03133	4.24%
167.99	Stachyose, Miscellaneous (%)	3	3	1.3507	0.12797	1.3507	0.12797	0.09049	9.47%	0.08800	3.82%
351.00	Chlortetracycline, Plate (mg/kg (ppm))	4	4	240.56	52.430	240.56	52.430	26.215	21.79%	12.622	7.01%
351.03	Chlortetracycline, LC (UV or FL) (mg/kg (ppm))	8	8	219.21	44.533	218.38	48.616	21.485	22.26%	7.1203	7.11%
351.04	Chlortetracycline, LC-MS (mg/kg (ppm))	1	1	259.50							
351.05	Chlortetracycline, LC-MS/MS (mg/kg (ppm))	3	3	259.60	73.726	259.60	73.726	52.132	28.40%	120.07	6.93%
364.02	Melengestrol Acetate, LC-MS (mg/kg (ppm))	1	1	3.0450							
365.00	Monensin, Plate (mg/kg (ppm))	2	2	233.08	46.789						
365.02	Monensin, LC (mg/kg (ppm))	5	5	238.27	22.182	238.27	22.182	9.9201	9.31%	10.060	7.02%
365.03	Monensin, LC-PCD (mg/kg (ppm))	6	6	249.68	18.675	249.07	19.745	10.076	7.93%	6.0750	6.97%
365.04	Monensin, LC-MS (mg/kg (ppm))	1	1	258.00							
365.05	Monensin, LC-MS/MS (mg/kg (ppm))	5	5	255.51	33.680	255.51	33.680	15.062	13.18%	21.040	6.95%
365.99	Monensin, Miscellaneous (mg/kg (ppm))	4	4	243.69	6.4370	243.69	6.4370	3.2185	2.64%	6.9450	7.00%
382.01	Sulfamethazine, LC (mg/kg (ppm))	5	5	283.75	49.821	283.75	49.821	22.281	17.56%	20.915	6.84%
382.02	Sulfamethazine, LC-PCD (mg/kg (ppm))	2	2	319.74	61.607						
382.03	Sulfamethazine, LC-MS (mg/kg (ppm))	1	1	223.50							
388.00	Tylosin, Plate (mg/kg (ppm))	1	1	59.700							
388.03	Tylosin, LC (mg/kg (ppm))	4	4	40.825	24.163	40.825	24.163	12.082	59.19%	4.1000	9.15%
388.04	Tylosin, LC-MS (mg/kg (ppm))	1	1	21.250							
388.05	Tylosin, LC-MS/MS (mg/kg (ppm))	1	1	53.050							
388.99	Tylosin, Miscellaneous (mg/kg (ppm))	1	1	31.335							
400.01	Water activity, Aqualab chilled mirror (Units)	6	6	0.50257	0.01008	0.50120	0.00807	0.00412	1.61%	0.00077	
400.99	Water activity, Miscellaneous (Units)	2	2	0.48175	0.01025						
412.01	Dietary Starch, Enzymatic-Colorimetric (%)	1	1	4.9750							
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	2	2	0.65025	0.01450						
516.43	Arsenic, total, ICP, Microwave (mg / kg (ppm))	1		0.00000							
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.59900	0.05091						
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm))	5	5	0.73739	0.08931	0.73739	0.08931	0.03994	12.11%	0.09234	16.75%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	3	3	0.14300	0.08895	0.14300	0.08895	0.05136	62.20%	0.00667	21.44%

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
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	3	2	0.21200	0.00990	0.21200	0.00990			0.03900	20.20%
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.21950	0.00636						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	5	4	0.20675	0.00569	0.20675	0.00569	0.00285	2.75%	0.01500	20.28%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	8.8625	2.1956						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	3	3	15.469	5.2892	15.469	5.2892	3.0537	34.19%	1.7550	10.59%
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	4	3	16.765	7.2138	16.765	7.2138	4.1649	43.03%	2.0500	10.47%
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	3.6350							
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	2	2	11.646	8.9856						
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2	2	0.39575	0.28178						
526.43	Lead, ICP, Microwave (mg / kg (ppm))	1		0.00000							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.63925	0.02722						
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	5	4	0.57385	0.05783	0.57385	0.05783	0.02892	10.08%	0.03355	17.39%
539.42	Nickel, ICP, Open vessel (mg / kg (ppm))	2	2	5.6050	0.71418						
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	2	2	7.4948	0.29027						
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	1	1	4.0650							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	3	3	6.5889	1.2883	6.5889	1.2883	0.74380	19.55%	0.36583	12.04%
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1		0.00000							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.00450							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	0.34700							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1	1	0.02100							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.06050							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	0.39000							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	0.42050							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.03800							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	1	1	0.00850							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	1	1	0.01100							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1		0.00000							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	1	1	0.00850							
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	0.00800							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c,22:6), Miscellaneous (% (w/w))	1		0.00000							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1		0.00000							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	1.3840							

Notes: Robust statistics not used if < 6 labs reporting, in this case means and SD's may be reported based on Raw Data with obvious blunders removed.

Test Material Code # 201728

Issue Date : 09/30/2017

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
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Animal Feed Scheme
Dairy Beef Feed, Medicated
Test Material Code # 201728

Method Precision Report

Methods Reported: 90
Labs Reporting: 193
Issue Date : 09/30/2017

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 (%)	8	8	7.0516	0.73488	0.73097	0.10713	0.73878	10.37%	1.519%	10.48%	6.8960
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	38	33	7.0581	0.43852	0.22558	0.06696	0.23531	3.19%	0.947%	3.33%	3.5140
001.99	Loss on Drying, Miscellaneous (%)	19	16	7.0978	0.52319	0.40518	0.05456	0.40884	5.62%	0.756%	5.67%	7.4939
002.01	Protein, Auto Kjel-Foss (%)	10	9	34.299	0.36341	0.35873	0.08219	0.36803	1.05%	0.240%	1.07%	4.4779
002.05	Protein, Copper, Boric Acid (%)	29	27	34.267	0.50997	0.48518	0.14773	0.50717	1.42%	0.431%	1.48%	3.4331
002.06	Protein, Combustion Nitrogen Analyzer (%)	128	119	34.714	0.49493	0.35676	0.17930	0.39928	1.03%	0.517%	1.15%	2.2269
003.00	Fat, Eth Ext., Direct (%)	12	10	1.8445	1.0467	0.30474	0.06151	0.31089	19.77%	3.991%	20.17%	5.0541
003.06	Fat, Pet Ether (%)	18	15	1.6280	0.24521	0.24846	0.02966	0.25022	15.37%	1.835%	15.48%	8.4352
003.09	Fat, Soxtec, Eth Ext (%)	19	17	1.6300	0.46326	0.39293	0.03651	0.39463	25.06%	2.328%	25.16%	10.810
003.10	Fat, Soxtec, Pet Ether (%)	31	29	1.2696	0.31051	0.31207	0.06997	0.31982	24.56%	5.507%	25.17%	4.5711
003.13	Fat, Soxtec, Hexane Ext. (%)	8	8	1.4772	0.30410	0.29949	0.07459	0.30864	20.27%	5.050%	20.89%	4.1377
003.14	Fat, Ankom (%)	42	37	1.6793	0.61527	0.35499	0.05347	0.35899	22.12%	3.331%	22.37%	6.7141
004.00	Fiber, Crude, Asbestos Free (%)	19	17	8.5277	0.46148	0.43157	0.10016	0.44304	5.09%	1.180%	5.22%	4.4235
004.06	Fiber, Fibertec (%)	25	23	8.3404	0.41370	0.34965	0.09836	0.36322	4.17%	1.173%	4.33%	3.6927
004.07	Fiber, ANKOM (%)	60	56	9.3753	2.0058	1.3086	0.24009	1.3304	14.07%	2.582%	14.31%	5.5415
005.00	Ash, 2h @ 600°C (%)	94	88	25.598	1.2374	0.89232	0.22170	0.91945	3.46%	0.860%	3.57%	4.1473
005.05	Ash, 3h @ 550°C (%)	29	27	26.203	0.51708	0.27441	0.19495	0.33661	1.04%	0.741%	1.28%	1.7267
005.99	Ash, Miscellaneous (%)	10	10	26.362	0.52928	0.49945	0.24774	0.55752	1.89%	0.940%	2.11%	2.2504
008.02	Fiber, Acid Detergent (%)	16	15	11.209	0.99035	0.71240	0.29840	0.77237	6.26%	2.622%	6.79%	2.5884
008.08	Fiber, Acid Detergent, ANKOM (%)	41	37	11.423	2.2651	1.2421	0.31974	1.2826	10.83%	2.789%	11.19%	4.0114
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	13	13	20.660	1.5654	1.5450	0.35599	1.5855	7.48%	1.723%	7.67%	4.4539
009.09	Fiber, Neutral Detergent, ANKOM (%)	38	34	20.700	2.1191	1.4160	0.45143	1.4862	6.94%	2.211%	7.28%	3.2922
010.99	Moisture, Miscellaneous (%)	21	18	7.3466	0.94451	0.30271	0.10272	0.31966	4.23%	1.434%	4.46%	3.1120
011.01	Loss on Drying, 135°C 2hr (%)	66	61	8.3193	0.51285	0.40432	0.09849	0.41615	4.83%	1.176%	4.97%	4.2252
012.01	Starch, Megazyme (%)	9	8	5.4467	1.3676	0.65112	0.15830	0.67009	12.92%	3.141%	13.30%	4.2330
013.00	Fat, Acid hydrolysis (%)	19	18	2.8792	1.0600	0.61090	0.18822	0.63923	22.80%	7.023%	23.85%	3.3963
013.02	Fat, Mojonnier, Bak Ext (%)	17	15	3.1811	0.85788	0.82739	0.07747	0.83101	25.40%	2.378%	25.51%	10.727
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	8	8	280.80	38.279	36.988	13.940	39.528	13.17%	4.964%	14.08%	2.8356
019.31	Calcium, AAS, Dry ash (%)	23	22	6.8327	0.85800	0.35271	0.16214	0.38819	5.04%	2.318%	5.55%	2.3943
019.41	Calcium, ICP, Dry ash (%)	28	27	6.9935	0.37848	0.31234	0.13719	0.34114	4.44%	1.951%	4.85%	2.4867
019.42	Calcium, ICP, Open vessel (%)	21	18	6.4353	1.7967	0.62527	0.27128	0.68158	8.98%	3.898%	9.79%	2.5125
019.43	Calcium, ICP, Microwave (%)	26	23	6.8642	0.41847	0.41907	0.07828	0.42632	6.09%	1.138%	6.20%	5.4462

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))	10	8	10.380	1.3083	1.3129	0.10840	1.3174	12.83%	1.059%	12.88%	12.153
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	15	14	474.96	17.961	16.805	8.9653	19.047	3.54%	1.888%	4.01%	2.1246
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	25	23	455.51	58.784	34.978	10.063	36.397	7.53%	2.168%	7.84%	3.6168
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	23	19	461.00	85.306	18.130	9.1719	20.318	3.79%	1.915%	4.24%	2.2153
022.43	Copper, ICP, Microwave (mg / kg (ppm))	25	23	477.87	26.602	21.887	9.6105	23.904	4.54%	1.994%	4.96%	2.4873
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	14	12	703.20	50.259	51.541	13.891	53.380	7.32%	1.974%	7.59%	3.8428
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	21	20	709.81	71.265	47.189	33.372	57.797	6.55%	4.631%	8.02%	1.7319
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	17	16	584.45	171.91	169.28	41.107	174.20	29.50%	7.163%	30.35%	4.2376
025.43	Iron, ICP, Microwave (mg / kg (ppm))	23	20	666.22	88.157	74.228	12.676	75.303	10.97%	1.873%	11.13%	5.9405
027.31	Magnesium, AAS, Dry ash (%)	17	16	0.69263	0.09910	0.04291	0.01222	0.04462	6.01%	1.710%	6.25%	3.6520
027.41	Magnesium, ICP, Dry ash (%)	25	23	0.73189	0.03334	0.02760	0.01204	0.03011	3.79%	1.654%	4.13%	2.5001
027.42	Magnesium, ICP, Open vessel (%)	21	18	0.67558	0.15160	0.04092	0.02003	0.04556	5.66%	2.771%	6.30%	2.2746
027.43	Magnesium, ICP, Microwave (%)	25	24	0.71486	0.03729	0.03505	0.01802	0.03941	4.90%	2.521%	5.51%	2.1866
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	14	14	419.88	26.242	25.319	9.7519	27.132	6.03%	2.323%	6.46%	2.7823
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	23	20	411.79	56.936	42.992	8.4297	43.811	10.28%	2.016%	10.48%	5.1971
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	22	20	402.26	106.74	67.242	16.810	69.311	16.11%	4.027%	16.61%	4.1233
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	25	25	430.54	21.209	19.404	12.110	22.873	4.51%	2.813%	5.31%	1.8887
031.01	Phosphorus, Photometric (%)	33	30	0.61845	0.02812	0.01798	0.01462	0.02317	2.93%	2.378%	3.77%	1.5854
031.41	Phosphorus, ICP, Dry ash (%)	28	25	0.60800	0.04581	0.03823	0.00940	0.03937	6.23%	1.532%	6.42%	4.1877
031.42	Phosphorus, ICP, Open vessel (%)	23	21	0.60564	0.05190	0.04977	0.02635	0.05631	8.22%	4.354%	9.30%	2.1373
031.43	Phosphorus, ICP, Microwave (%)	28	27	0.59760	0.04226	0.04159	0.01056	0.04291	6.96%	1.767%	7.18%	4.0638
032.31	Potassium, AAS, Dry ash (%)	17	14	2.3253	0.20659	0.10261	0.02803	0.10637	4.34%	1.186%	4.50%	3.7946
032.41	Potassium, ICP, Dry ash (%)	25	25	2.4196	0.10747	0.10418	0.03731	0.11066	4.31%	1.542%	4.57%	2.9660
032.42	Potassium, ICP, Open vessel (%)	22	20	2.3211	0.48094	0.19552	0.08493	0.21317	7.96%	3.457%	8.68%	2.5099
032.43	Potassium, ICP, Microwave (%)	29	26	2.3578	0.14806	0.07744	0.04867	0.09147	3.26%	2.046%	3.85%	1.8792
033.00	Salt as chloride, Sol Cl (%)	22	18	3.8901	0.17149	0.13256	0.02007	0.13407	3.39%	0.514%	3.43%	6.6796
033.01	Salt as chloride, Poten Cl (%)	32	29	4.0106	0.13980	0.08839	0.03765	0.09607	2.22%	0.944%	2.41%	2.5518
033.99	Salt, Miscellaneous (%)	10	9	3.6041	0.97835	0.97767	0.05135	0.97902	27.13%	1.425%	27.16%	19.066
035.31	Sodium, AAS, Dry ash (%)	15	14	0.81063	0.08873	0.04687	0.01235	0.04847	5.93%	1.561%	6.13%	3.9251
035.41	Sodium, ICP, Dry ash (%)	25	24	0.82004	0.05679	0.05025	0.01764	0.05326	6.17%	2.165%	6.54%	3.0189
035.42	Sodium, ICP, Open vessel (%)	17	16	0.78992	0.13006	0.04837	0.03138	0.05765	5.91%	3.832%	7.04%	1.8374
035.43	Sodium, ICP, Microwave (%)	24	22	0.78130	0.04392	0.03633	0.01421	0.03901	4.64%	1.813%	4.98%	2.7461
036.42	Sulfur, ICP, Open vessel (%)	20	17	0.61663	0.10668	0.07490	0.01667	0.07673	11.80%	2.627%	12.09%	4.6036
036.43	Sulfur, ICP, Microwave (%)	15	15	0.62336	0.04377	0.04151	0.01962	0.04592	6.66%	3.148%	7.37%	2.3400
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	16	13	1,243.7	147.25	64.869	20.534	68.041	5.18%	1.640%	5.44%	3.3136
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	24	22	1,158.3	162.41	101.08	34.214	106.71	8.53%	2.888%	9.01%	3.1190
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	21	19	1,048.6	401.47	406.16	24.664	406.91	39.30%	2.387%	39.38%	16.498
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	24	24	1,196.7	118.27	115.47	36.168	121.00	9.65%	3.022%	10.11%	3.3454
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	9	8	3.2008	0.36648	0.35614	0.12229	0.37655	11.13%	3.821%	11.76%	3.0792
106.02	Vitamin A, LC (KU / kg)	20	18	22.969	8.9144	6.8391	3.5879	7.7231	28.25%	14.820%	31.90%	2.1525

Test Material Code # 201728

Issue Date : 09/30/2017

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
109.02	Vitamin E, LC (IU/kg)	15	14	423.49	108.32	38.894	26.564	47.100	8.66%	5.912%	10.48%	1.7731
120.00	Alanine, Post-col Ninhydrin Der (%)	21	20	0.95472	0.04331	0.04268	0.01041	0.04393	4.47%	1.091%	4.60%	4.2189
121.00	Arginine, Post-col Ninhydrin Der (%)	20	19	1.3633	0.06167	0.05990	0.02077	0.06339	4.39%	1.523%	4.65%	3.0525
122.00	Aspartic, Post-col Ninhydrin Der (%)	21	19	1.9190	0.06750	0.02059	0.03978	0.04479	1.08%	2.093%	2.36%	1.1260
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	21	19	0.35294	0.03360	0.02431	0.00603	0.02505	6.79%	1.686%	7.00%	4.1517
125.00	Glutamic, Post-col Ninhydrin Der (%)	21	19	3.6194	0.17245	0.11512	0.06692	0.13315	3.20%	1.861%	3.70%	1.9899
126.00	Glycine, Post-col Ninhydrin Der (%)	21	18	0.96961	0.03820	0.01870	0.01084	0.02161	1.94%	1.123%	2.24%	1.9945
127.00	Histidine, Post-col Ninhydrin Der (%)	20	18	0.50397	0.02789	0.01577	0.00633	0.01699	3.16%	1.269%	3.41%	2.6852
128.00	Isoleucine, Post-col Ninhydrin Der (%)	21	20	0.81215	0.04731	0.04375	0.01473	0.04616	5.36%	1.805%	5.66%	3.1343
129.00	Leucine, Post-col Ninhydrin Der (%)	21	18	1.4496	0.05629	0.04093	0.01176	0.04259	2.84%	0.816%	2.96%	3.6220
130.00	L-Lysine, Post-col Ninhydrin Der (%)	21	20	1.0197	0.05966	0.04052	0.01647	0.04374	4.01%	1.630%	4.33%	2.6563
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	21	20	0.26805	0.01722	0.01678	0.00780	0.01851	6.26%	2.911%	6.90%	2.3719
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	21	19	0.93693	0.03959	0.03727	0.01468	0.04005	3.97%	1.563%	4.26%	2.7280
133.00	Proline, Post-col Ninhydrin Der (%)	19	18	1.1518	0.07300	0.06735	0.03674	0.07672	5.82%	3.177%	6.63%	2.0880
134.00	Serine, Post-col Ninhydrin Der (%)	21	21	0.95805	0.03832	0.03466	0.02312	0.04166	3.62%	2.413%	4.35%	1.8020
135.00	Threonine, Post-col Ninhydrin Der (%)	22	20	0.79318	0.05841	0.02834	0.01444	0.03180	3.58%	1.823%	4.02%	2.2030
137.00	Tyrosine, Post-col Ninhydrin Der (%)	15	14	0.57202	0.13452	0.09821	0.02724	0.10192	16.47%	4.569%	17.09%	3.7410
138.00	Valine, Post-col Ninhydrin Der (%)	21	19	0.97325	0.04427	0.04344	0.01569	0.04619	4.47%	1.615%	4.75%	2.9438

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