Animal Feed Scheme
Poultry/Game Bird Feed
Test Material Code # 201630

Method Summary Report

(Precision Report Follows)

 # Methods Reported: 350
 # Labs Reporting: 204
Issue Date : 11/30/2016

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
000.02	Urea, As protein, Colorimetric (%)	1	1	0.20000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	7	7	7.8655	0.63261	7.8655	0.71738	0.33893	9.12%	0.28414	2.93%
001.03	Loss on Drying, Low temp. methods (%)	5	5	8.4202	0.12749	8.4500	0.12550	0.06275	1.49%	0.04720	2.90%
001.05	Loss on Drying, LECO (%)	1	1	8.2050							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	43	40	8.4692	0.33389	8.4368	0.28092	0.05552	3.33%	0.08241	2.90%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	2	2	8.5200	0.11314						
001.99	Loss on Drying, Miscellaneous (%)	19	19	8.1759	0.55984	8.2040	0.56994	0.16344	6.95%	0.16422	2.91%
002.00	Protein, Crude (%)	4	4	28.128	1.0866	28.128	1.0866	0.54332	3.86%	0.09100	1.89%
002.01	Protein, Auto Kjel-Foss (%)	14	14	27.515	0.28136	27.515	0.31907	0.10659	1.16%	0.17093	1.91%
002.02	Protein, Semiauto Autoanalyzer (%)	2	2	27.471	0.12519						
002.04	Protein, Copper Catalyst (%)	7	7	28.300	1.9170	27.812	0.84836	0.40081	3.05%	0.27714	1.90%
002.05	Protein, Copper, Boric Acid (%)	32	31	27.514	0.32684	27.542	0.25901	0.05815	0.94%	0.09971	1.91%
002.06	Protein, Combustion Nitrogen Analyzer (%)	133	131	27.925	0.50316	27.939	0.28963	0.03163	1.04%	0.18907	1.89%
002.07	Protein, Block Digestion (%)	1	1	27.685							
002.08	Protein, Cu/Ti (%)	3	3	27.236	0.45199	27.236	0.45199	0.26096	1.66%	0.24730	1.92%
002.10	Protein, Block dig/distillation (%)	1	1	27.580							
002.11	Protein, NIR (%)	10	9	28.540	1.6424	28.674	1.5378	0.64074	5.36%	0.16967	1.87%
002.99	Protein, Miscellaneous (%)	4	4	27.921	1.2991	27.287	0.33929	0.19589	1.24%	0.19975	1.91%
003.00	Fat, Eth Ext., Direct (%)	14	14	3.2401	0.34289	3.1821	0.20360	0.06802	6.40%	0.11509	3.36%
003.06	Fat, Pet Ether (%)	20	19	3.1016	0.18980	3.0759	0.15153	0.04346	4.93%	0.08013	3.38%
003.09	Fat, Soxtec, Eth Ext (%)	20	19	3.2057	0.20745	3.1803	0.15661	0.04491	4.92%	0.08516	3.36%
003.10	Fat, Soxtec, Pet Ether (%)	30	30	2.9942	0.18013	3.0052	0.17251	0.03937	5.74%	0.06913	3.39%
003.11	Fat, NIR (%)	10	10	3.0871	0.53231	3.0871	0.60364	0.23861	19.55%	0.03136	3.38%
003.12	Fat, Hexane Ext (%)	2	2	3.1000	0.01414						
003.13	Fat, Soxtec, Hexane Ext. (%)	12	12	3.2322	0.39632	3.1588	0.27900	0.10067	8.83%	0.14539	3.36%
003.14	Fat, Ankom (%)	42	42	2.9417	0.24613	2.9452	0.24824	0.04788	8.43%	0.12633	3.40%
003.99	Fat, Miscellaneous (%)	5	5	2.8240	0.70449	3.1338	0.14868	0.07434	4.74%	0.03600	3.37%
004.00	Fiber, Crude, Asbestos Free (%)	17	17	4.8587	0.50278	4.8533	0.44188	0.13397	9.10%	0.24827	3.15%
004.01	Fiber, Sing Filt (%)	1	1	5.3000							
004.03	Fiber, Fritted Glass (%)	5	5	4.4220	1.3627	3.9775	1.0764	0.53822	27.06%	0.11600	3.25%

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004.06	Fiber, Fibertec (%)	25	24	5.0410	0.33395	5.0667	0.31335	0.07995	6.18%	0.13171	3.13%
004.07	Fiber, ANKOM (%)	67	66	4.7863	0.51056	4.7938	0.45043	0.06930	9.40%	0.20422	3.16%
004.11	Fiber, NIR (%)	10	10	4.3478	0.65164	4.3478	0.73896	0.29210	17.00%	0.06976	3.21%
004.99	Fiber, Miscellaneous (%)	3	3	4.0838	0.07556	4.0838	0.07556	0.04362	1.85%	0.05767	3.24%
005.00	Ash, 2h @ 600°C (%)	102	100	6.9446	0.22284	6.9385	0.21773	0.02722	3.14%	0.08049	2.99%
005.02	Ash, LECO (%)	1	1	6.9550							
005.05	Ash, 3h @ 550°C (%)	29	28	7.1100	0.21127	7.1005	0.17980	0.04247	2.53%	0.05561	2.98%
005.11	Ash, NIR (%)	7	7	7.8900	1.9311	7.8900	2.1898	1.0346	27.75%	0.11429	2.93%
005.99	Ash, Miscellaneous (%)	12	12	7.0800	0.22723	7.0830	0.25110	0.09061	3.55%	0.11500	2.98%
006.00	Total sugars, As sucrose (%)	3	3	5.7433	0.41906	5.7433	0.41906	0.24194	7.30%	0.38000	3.07%
006.01	Total sugars, Mod. Fehling Soln (%)	2	2	6.6175	0.30759						
006.03	Total sugars, Invert w/o Invrsn (%)	1	1	6.6700							
006.99	Total sugars, Miscellaneous (%)	2	2	4.7300	2.9981						
008.02	Fiber, Acid Detergent (%)	16	15	6.5700	0.76779	6.6417	0.67670	0.21840	10.19%	0.16230	3.01%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	6.6500							
008.08	Fiber, Acid Detergent, ANKOM (%)	42	42	6.6723	0.83756	6.6212	0.72940	0.14069	11.02%	0.23674	3.01%
008.99	Fiber, Acid Detergent Miscellaneous (%)	4	4	6.6250	0.81803	6.6250	0.81803	0.40901	12.35%	0.09000	3.01%
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	14.465							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	12	12	14.252	2.0844	13.923	1.4062	0.50742	10.10%	0.41614	2.68%
009.09	Fiber, Neutral Detergent, ANKOM (%)	35	34	13.815	1.7854	13.693	1.3903	0.29803	10.15%	0.46152	2.70%
009.99	Fiber, Neutral Det Miscellaneous (%)	4	4	14.070	2.6331	14.070	2.6331	1.3165	18.71%	0.37000	2.67%
010.03	Moisture, Karl-Fischer (%)	3	3	8.5267	0.38582	8.5267	0.38582	0.22275	4.52%	0.10000	2.90%
010.11	Moisture, NIR (%)	6	6	9.1064	0.63264	9.1064	0.71741	0.36610	7.88%	0.08393	2.87%
010.99	Moisture, Miscellaneous (%)	18	18	8.2954	0.81226	8.4123	0.57355	0.16899	6.82%	0.16356	2.90%
011.01	Loss on Drying, 135°C 2hr (%)	74	73	9.1187	0.39504	9.1387	0.37491	0.05485	4.10%	0.09174	2.87%
011.02	Loss on Drying, 130°C for 2 hours (%)	2	2	8.9550	0.07071						
011.03	Loss on drying, 130°C, 1 hour, Flour (%)	1	1	8.4750							
011.99	Loss on Drying, High Temp. Methods Miscellaneo	4	4	9.2650	0.16036	9.2650	0.16036	0.08018	1.73%	0.11500	2.86%
012.00	Starch, Polarimetric (Ewers) (%)	12	12	27.108	1.4800	27.274	1.1646	0.42024	4.27%	0.21083	1.91%
012.01	Starch, Megazyme (%)	8	8	22.479	1.8365	22.639	1.6950	0.74908	7.49%	0.74245	2.10%
012.02	Starch, Colorimetric (GOP) (%)	1	1	29.025							
012.03	Starch, Enzymatic (%)	5	5	24.537	1.6842	24.537	1.6842	0.75321	6.86%	0.34802	2.02%
012.04	Starch, YSI Analyzer (%)	5	5	23.745	0.58905	24.006	0.08731	0.04365	0.36%	0.35400	2.04%
012.11	Starch, NIR (%)	5	5	25.643	1.8000	24.860	0.48241	0.24120	1.94%	0.47440	2.01%
013.00	Fat, Acid hydrolysis (%)	22	22	4.0657	0.54668	4.0368	0.45417	0.12104	11.25%	0.16886	3.24%
013.02	Fat, Mojonnier, Bak Ext (%)	19	19	4.2777	0.61005	4.3806	0.44469	0.12752	10.15%	0.22522	3.20%
013.08	Fat, Roese-Gottlieb Modified (%)	1	1	2.6300							
013.10	Fat, Soxtec-Acid Hydrolysis (%)	6	6	3.5199	0.61837	3.6542	0.35935	0.18338	9.83%	0.12985	3.29%

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013.13	Fat, Ankom- Acid Hydrolysis (%)	5	5	3.8397	0.56848	3.8397	0.56848	0.25423	14.81%	0.32780	3.27%
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	3	3	80.892	16.395	80.892	16.395	9.4654	20.27%	2.9833	8.26%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	74.900							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	7	7	91.426	41.475	88.102	39.088	18.467	44.37%	1.4782	8.15%
015.52	Aluminum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	47.580							
015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	1	1	87.500							
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	4	17.856	1.3953	17.856	1.3953	0.69764	7.81%	0.54750	10.37%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	4	4	16.725	2.3610	16.817	2.8829	1.6644	17.14%	0.55000	10.46%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	4	4	24.096	13.290	17.462	0.90106	0.52023	5.16%	0.97750	10.40%
017.52	Boron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	13.680							
019.00	Calcium, Ox-Mn04 Vol. (%)	12	12	1.2981	0.10573	1.3062	0.07020	0.02533	5.37%	0.01254	3.84%
019.02	Calcium, Hach Method (%)	1	1	2.1210							
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	1.3903							
019.08	Calcium, EDTA (%)	8	8	1.3728	0.25886	1.3008	0.08233	0.03638	6.33%	0.00799	3.84%
019.09	Calcium, Ion-selective electrode (%)	1	1	1.3865							
019.31	Calcium, AAS, Dry ash (%)	31	30	1.2976	0.07982	1.2893	0.05706	0.01302	4.43%	0.03145	3.85%
019.32	Calcium, AAS, Open vessel (%)	4	4	1.4423	0.16173	1.4423	0.16173	0.08087	11.21%	0.01650	3.79%
019.33	Calcium, AAS, Microwave (%)	2	2	1.3510	0.01980						
019.34	Calcium, AAS, Dry ash (%)	1	1	1.2660							
019.41	Calcium, ICP, Dry ash (%)	32	31	1.3104	0.05862	1.3124	0.05952	0.01336	4.54%	0.02493	3.84%
019.42	Calcium, ICP, Open vessel (%)	24	23	1.3339	0.09089	1.3291	0.09286	0.02420	6.99%	0.03899	3.83%
019.43	Calcium, ICP, Microwave (%)	21	21	1.3077	0.10677	1.3079	0.07387	0.02015	5.65%	0.02772	3.84%
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	1.2605	0.06590	1.2605	0.06590	0.03804	5.23%	0.00637	3.86%
019.53	Calcium, ICP-MS, Microwave (%)	5	5	1.1660	0.24238	1.2712	0.06705	0.03352	5.27%	0.02230	3.86%
019.99	Calcium, Miscellaneous (%)	6	6	1.1717	0.42561	1.2994	0.14529	0.07414	11.18%	0.04333	3.85%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	5	5	2.0580	0.87973	2.0580	0.87973	0.39343	42.75%	0.28000	14.35%
021.34	Cobalt, AAS, Graphite furnace (mg / kg (ppm))	1	1	1.4950							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	3	3	1.1465	0.35983	1.1465	0.35983	0.20775	31.39%	0.07367	15.67%
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	3	3	1.2867	0.13868	1.2867	0.13868	0.08007	10.78%	0.09333	15.40%
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	8	8	1.5842	0.28365	1.5492	0.20608	0.09108	13.30%	0.10228	14.98%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	4	4	0.78813	0.11473	0.78813	0.11473	0.05737	14.56%	0.04525	16.58%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	5	5	1.1144	0.45932	1.0305	0.48413	0.24206	46.98%	0.08852	15.92%
021.99	Cobalt, Miscellaneous (mg / kg (ppm))	1	1	1.5850							
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	17	17	20.038	1.3002	20.099	1.3288	0.40284	6.61%	0.44141	10.18%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	4	4	17.772	2.8655	17.772	2.8655	1.4328	16.12%	2.2885	10.37%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	3	3	21.413	2.5555	21.413	2.5555	1.4754	11.93%	1.8400	10.09%
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	21	20	20.032	1.3443	20.051	1.4823	0.41431	7.39%	1.0917	10.19%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	23	22	18.741	5.0144	19.819	2.3705	0.63173	11.96%	0.58923	10.21%

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022.43	Copper, ICP, Microwave (mg / kg (ppm))	19	18	20.513	3.6859	19.902	2.2275	0.65629	11.19%	0.71471	10.20%
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	2	2	21.348	0.57629						
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	4	4	70.320	99.796	20.426	1.6672	0.96254	8.16%	6.2031	10.16%
022.99	Copper, Miscellaneous (mg / kg (ppm))	3	3	18.517	0.47522	18.517	0.47522	0.27437	2.57%	0.50000	10.31%
023.01	Fluorine, Ion Sel Elect (mg / kg (ppm))	1	1	5.8500							
024.52	Iodine, ICP-MS, Open vessel (mg / kg (ppm))	1	1	1.2050							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	18	18	207.59	30.134	208.37	25.394	7.4817	12.19%	5.1739	7.16%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	3	3	242.91	120.78	242.91	120.78	69.734	49.72%	2.0513	7.00%
025.33	Iron, AAS, Microwave (mg / kg (ppm))	2	2	211.20	10.889						
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	19	200.90	10.115	201.95	8.3027	2.3810	4.11%	5.8917	7.20%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	19	18	178.62	51.132	189.01	24.681	7.2718	13.06%	6.4852	7.27%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	20	20	210.62	40.500	204.06	23.443	6.5526	11.49%	4.2230	7.18%
025.51	Iron, ICP-MS, Dry ash (mg / kg (ppm))	1	1	260.89							
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	3	3	184.99	3.5775	184.99	3.5775	2.0655	1.93%	4.1833	7.29%
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	2	2	178.54	45.912						
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	193.67	11.015	193.67	11.015	6.3596	5.69%	9.3333	7.24%
027.31	Magnesium, AAS, Dry ash (%)	21	21	0.23933	0.01421	0.23897	0.01060	0.00289	4.44%	0.00548	4.96%
027.32	Magnesium, AAS, Open vessel (%)	4	4	0.23335	0.02074	0.23335	0.02074	0.01037	8.89%	0.00665	4.98%
027.33	Magnesium, AAS, Microwave (%)	2	2	0.23978	0.00032						
027.41	Magnesium, ICP, Dry ash (%)	27	26	0.24063	0.01167	0.24168	0.00947	0.00232	3.92%	0.00401	4.95%
027.42	Magnesium, ICP, Open vessel (%)	24	23	0.24338	0.01768	0.24462	0.01563	0.00407	6.39%	0.00752	4.94%
027.43	Magnesium, ICP, Microwave (%)	21	21	0.24001	0.01810	0.24120	0.01720	0.00469	7.13%	0.00439	4.95%
027.52	Magnesium, ICP-MS, Open vessel (%)	3	3	0.22578	0.00958	0.22578	0.00958	0.00553	4.24%	0.00597	5.00%
027.53	Magnesium, ICP-MS, Microwave (%)	3	3	0.23860	0.01928	0.23860	0.01928	0.01113	8.08%	0.01040	4.96%
027.99	Magnesium, Miscellaneous (%)	4	4	0.24500	0.02041	0.24500	0.02041	0.01021	8.33%	0.00500	4.94%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	16	16	111.13	6.7116	110.48	6.1030	1.9072	5.52%	2.1943	7.88%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	4	4	109.99	8.3498	114.16	0.73464	0.42415	0.64%	3.7948	7.84%
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	2	2	113.40	6.7900						
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	23	23	104.01	16.376	107.44	6.7979	1.7718	6.33%	3.6841	7.91%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	23	23	110.04	15.117	110.26	13.257	3.4554	12.02%	5.8574	7.88%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	20	20	112.42	7.4923	111.44	5.7968	1.6203	5.20%	2.8320	7.87%
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm)	3	3	113.91	6.6370	113.91	6.6370	3.8319	5.83%	5.0000	7.84%
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	2	2	111.28	4.5608						
028.99	Manganese, Miscellaneous (mg / kg (ppm))	5	5	111.26	3.4660	111.26	3.4660	1.5500	3.12%	3.0400	7.87%
031.01	Phosphorus, Photometric (%)	46	44	0.71567	0.03943	0.71620	0.03211	0.00605	4.48%	0.00882	4.21%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%	3	3	0.74000	0.00500	0.73750	0.00354	0.00250	0.48%	0.00333	4.19%
031.03	Phosphorus, Autoanalyzer (%)	5	5	0.71669	0.01758	0.71669	0.01758	0.00786	2.45%	0.01042	4.21%
031.06	Phosphorus, Hach Method (%)	2	2	0.73450	0.01485						

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031.41	Phosphorus, ICP, Dry ash (%)	31	30	0.72781	0.03875	0.72631	0.03493	0.00797	4.81%	0.01451	4.20%
031.42	Phosphorus, ICP, Open vessel (%)	24	23	0.73229	0.03893	0.73218	0.04339	0.01131	5.93%	0.01919	4.19%
031.43	Phosphorus, ICP, Microwave (%)	22	22	0.73472	0.03563	0.73483	0.03522	0.00939	4.79%	0.01340	4.19%
031.44	Phosphorus, ICP, Dry ash (%)	1	1	0.77500							
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.70155							
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.72775	0.00813						
031.99	Phosphorus, Miscellaneous (%)	5	5	0.70400	0.01981	0.70400	0.01981	0.00886	2.81%	0.00400	4.22%
032.02	Potassium, Flame Emission (%)	2	2	1.4200	0.02121						
032.31	Potassium, AAS, Dry ash (%)	18	17	1.3267	0.18734	1.3279	0.13406	0.04064	10.10%	0.02069	3.83%
032.32	Potassium, AAS, Open vessel (%)	2	2	1.2975	0.04596						
032.41	Potassium, ICP, Dry ash (%)	24	23	1.3397	0.10739	1.3547	0.07039	0.01835	5.20%	0.02732	3.82%
032.42	Potassium, ICP, Open vessel (%)	22	22	1.4000	0.09925	1.4084	0.05751	0.01533	4.08%	0.05229	3.80%
032.43	Potassium, ICP, Microwave (%)	19	19	1.3904	0.08965	1.3864	0.09196	0.02637	6.63%	0.01879	3.81%
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	1.3701	0.07064						
032.53	Potassium, ICP-MS, Microwave (%)	2	2	1.3647	0.01464						
032.99	Potassium, Miscellaneous (%)	5	4	1.3925	0.09215	1.3925	0.09215	0.04608	6.62%	0.02500	3.81%
033.00	Salt as chloride, Sol Cl (%)	22	21	0.33258	0.08493	0.33742	0.06326	0.01726	18.75%	0.01287	4.71%
033.01	Salt as chloride, Poten Cl (%)	33	32	0.36835	0.03223	0.36903	0.03085	0.00682	8.36%	0.00899	4.65%
033.03	Salt as chloride, Quantab (%)	7	7	0.38857	0.05170	0.38857	0.05862	0.02770	15.09%	0.03714	4.61%
033.05	Salt as chloride, Ion Sel Electrode (%)	5	5	0.42300	0.13142	0.36625	0.03945	0.01972	10.77%	0.01200	4.65%
033.99	Salt, Miscellaneous (%)	9	9	0.46878	0.36907	0.35584	0.06064	0.02527	17.04%	0.03111	4.67%
034.01	Selenium, Fluor (mg / kg (ppm))	3	3	0.50628	0.03361	0.50628	0.03361	0.01940	6.64%	0.03257	17.72%
034.04	Selenium, AA, Hydride (mg / kg (ppm))	6	6	0.50792	0.07811	0.50792	0.08858	0.04520	17.44%	0.02450	17.71%
034.31	Selenium, AAS, Dry ash (mg / kg (ppm))	1	1	0.72000							
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	1		0.50000							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	1	1	3.5000							
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.58833	0.11060	0.58833	0.11060	0.06386	18.80%	0.02333	17.33%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	5	5	1.5722	2.1717	0.60276	0.15092	0.07546	25.04%	0.09362	17.26%
034.99	Selenium, Miscellaneous (mg / kg (ppm))	1	1	0.51000							
035.01	Sodium, Ion-selective electrode (%)	5	5	0.12540	0.01262	0.12725	0.01376	0.00688	10.82%	0.00280	5.45%
035.05	Sodium, Flame Emission (%)	4	4	0.12963	0.01809	0.12963	0.01809	0.00904	13.96%	0.00625	5.44%
035.31	Sodium, AAS, Dry ash (%)	23	22	0.12384	0.01355	0.12365	0.01465	0.00390	11.85%	0.00363	5.48%
035.32	Sodium, AAS, Open vessel (%)	2	2	0.13500	0.02828						
035.41	Sodium, ICP, Dry ash (%)	25	24	0.12423	0.00935	0.12358	0.00909	0.00232	7.35%	0.00538	5.48%
035.42	Sodium, ICP, Open vessel (%)	20	20	0.12314	0.01023	0.12294	0.00897	0.00251	7.30%	0.00732	5.48%
035.43	Sodium, ICP, Microwave (%)	19	18	0.12084	0.01281	0.11984	0.01162	0.00342	9.69%	0.00559	5.50%
035.51	Sodium, ICP-MS, Dry ash (%)	1	1	0.13000							
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.12080	0.00184						

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035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.11313	0.00760						
035.99	Sodium, Miscellaneous (%)	6	6	0.10500	0.03240	0.11431	0.01231	0.00628	10.77%	0.00667	5.54%
036.00	Sulfur, Gravimetric (%)	1	1	0.29250							
036.04	Sulfur, LECO (%)	3	3	0.30667	0.01528	0.30000	0.01414	0.01000	4.71%	0.00667	4.79%
036.42	Sulfur, ICP, Open vessel (%)	20	20	0.30608	0.01638	0.30563	0.01753	0.00490	5.74%	0.01095	4.78%
036.43	Sulfur, ICP, Microwave (%)	12	12	0.33085	0.05707	0.32052	0.03181	0.01148	9.92%	0.01296	4.75%
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	2,575.0							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.32150							
036.99	Sulfur, Miscellaneous (%)	2	2	0.31250	0.03182						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	18	17	132.45	18.625	128.96	10.930	3.3137	8.48%	2.2804	7.70%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	4	4	127.49	39.076	127.49	39.076	19.538	30.65%	5.5740	7.71%
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	1	1	121.90							
037.34	Zinc, AAS, Dry ash (mg / kg (ppm))	1	1	126.52							
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	23	22	124.62	19.245	127.46	8.9942	2.3970	7.06%	3.8193	7.71%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	22	21	126.84	14.801	128.22	10.858	2.9617	8.47%	2.9840	7.71%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	22	21	133.04	12.100	132.26	9.5839	2.6142	7.25%	3.7937	7.67%
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	3	3	122.58	19.180	122.58	19.180	11.074	15.65%	3.5633	7.76%
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	4	4	159.07	84.460	117.09	11.308	6.5285	9.66%	9.2325	7.81%
037.99	Zinc, Miscellaneous (mg / kg (ppm))	5	5	129.60	10.286	129.60	10.286	4.6000	7.94%	6.0000	7.69%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	2	2	2.7350	0.02121						
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	4	4	3.0125	0.33896	2.8900	0.28688	0.16563	9.93%	0.20500	13.64%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	9	9	3.0086	0.81637	2.9935	0.65406	0.27253	21.85%	0.15828	13.56%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm	2	2	2.8900	0.48790						
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	4	4	2.6862	0.66137	2.6862	0.66137	0.33069	24.62%	0.08653	13.79%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	10.100							
040.43	Barium, ICP, Microwave (mg / kg (ppm))	2	2	11.337	2.7042						
040.52	Barium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	10.530	0.74953						
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	9.7704							
041.43	Vanadium, ICP, Microwave (mg / kg (ppm))	1	1	1.9000							
041.52	Vanadium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.62025	0.47341						
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	2	2	1.1915	1.1434						
042.00	Chloride, Titrimetric (%)	2	2	0.95500	1.1031						
042.02	Chloride, Ion Chromatography (%)	1	1	0.22000							
042.99	Chloride, Miscellaneous (%)	1	1	0.20000							
048.01	Bacitracin, Plate MeOH Ext (mg / kg (ppm))	2	2	18.753	0.98581						
048.04	Bacitracin, LC (mg / kg (ppm))	1	1	9.7500							
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	2,535.0							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	138.50							

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103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	26.250							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	8.6200							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	2	2	34.575	0.24749						
104.03	Riboflavin, LC (mg / kg (ppm))	3	3	28.430	4.9006	28.430	4.9006	2.8294	17.24%	2.3533	9.67%
104.99	Riboflavin, Miscellaneous (mg / kg (ppm))	1	1	27.800							
105.00	Thiamine, LC (mg / kg (ppm))	2	2	3.9083	1.0419						
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	0.65150							
106.00	Vitamin A, Color (KU / kg)	1	1	20.050							
106.01	Vitamin A, UV (KU / kg)	1	1	20.450							
106.02	Vitamin A, LC (KU / kg)	22	21	18.074	5.7006	17.657	5.3019	1.4462	30.03%	0.77098	
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	65.750							
108.01	Vitamin D3, LC, AOAC (KU / kg)	1	1	7.0000							
108.02	Vitamin D3, LC (KU / kg)	5	5	5.5830	1.7670	5.5830	1.7670	0.79021	31.65%	0.40600	
109.02	Vitamin E, LC (IU/kg)	20	19	67.727	16.181	66.599	15.792	4.5286	23.71%	2.0846	
109.99	Vitamin E, Miscellaneous (IU/kg)	1	1	61.500							
112.01	Pyridoxine, LC (µg / g)	1	1	13.500							
112.99	Pyridoxine, Miscellaneous (µg / g)	1	1	4.5300							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	4.0000							
114.01	Biotin, Microbiological (mg / kg (ppm))	1	1	1.1800							
120.00	Alanine, Post-col Ninhydrin Der (%)	18	18	1.3426	0.05373	1.3377	0.04205	0.01239	3.14%	0.01696	3.83%
120.02	Alanine, Post-col OPA Der (%)	1	1	1.3530							
120.05	Alanine, Pre-col AQC Der (%)	2	2	1.3075	0.00354						
120.99	Alanine, Miscellaneous (%)	2	2	1.3300	0.09899						
121.00	Arginine, Post-col Ninhydrin Der (%)	18	18	1.8552	0.06124	1.8564	0.06686	0.01970	3.60%	0.03368	3.64%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.8560							
121.05	Arginine, Pre-col AQC Der (%)	2	2	1.9300	0.02121						
121.99	Arginine, Miscellaneous (%)	1	1	2.1850							
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	17	2.8719	0.07203	2.8763	0.07036	0.02133	2.45%	0.03434	3.41%
122.02	Aspartic, Post-col OPA Der (%)	1	1	2.9435							
122.05	Aspartic, Pre-col AQC Der (%)	2	2	2.9575	0.02475						
122.99	Aspartic, Miscellaneous (%)	2	2	2.9325	0.03182						
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	18	17	0.38937	0.02992	0.38815	0.02326	0.00705	5.99%	0.00791	4.61%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.39100							
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	3	3	0.40877	0.00333	0.41065	0.00092	0.00065	0.22%	0.00333	4.57%
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.38000							
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	17	4.8035	0.11066	4.8126	0.10517	0.03189	2.19%	0.05096	3.16%
125.02	Glutamic, Post-col OPA Der (%)	1	1	4.8075							
125.05	Glutamic, Pre-col AQC Der (%)	2	2	4.8450	0.03536						

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125.99	Glutamic, Miscellaneous (%)	2	2	4.9875	0.22981						
126.00	Glycine, Post-col Ninhydrin Der (%)	18	17	1.3662	0.03728	1.3663	0.03051	0.00925	2.23%	0.01508	3.82%
126.02	Glycine, Post-col OPA Der (%)	1	1	1.3600							
126.05	Glycine, Pre-col AQC Der (%)	2	2	1.4000	0.00707						
126.99	Glycine, Miscellaneous (%)	2	2	1.4600	0.15556						
127.00	Histidine, Post-col Ninhydrin Der (%)	17	17	0.70391	0.01582	0.70487	0.01536	0.00466	2.18%	0.00738	4.22%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.68450							
127.05	Histidine, Pre-col AQC Der (%)	2	2	0.78500	0.12728						
127.99	Histidine, Miscellaneous (%)	1	1	0.77000							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	17	17	1.1573	0.03870	1.1602	0.03604	0.01093	3.11%	0.02048	3.91%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	1.1680							
128.05	Isoleucine, Pre-col AQC Der (%)	2	2	1.1700	0.02121						
128.99	Isoleucine, Miscellaneous (%)	2	2	1.2225	0.11667						
129.00	Leucine, Post-col Ninhydrin Der (%)	18	17	2.1149	0.06053	2.1148	0.04133	0.01253	1.95%	0.02074	3.57%
129.02	Leucine, Post-col OPA Der (%)	1	1	2.0970							
129.05	Leucine, Pre-col AQC Der (%)	2	2	2.1125	0.08132						
129.99	Leucine, Miscellaneous (%)	2	2	2.2700	0.26163						
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	19	1.5958	0.06685	1.6010	0.06296	0.01805	3.93%	0.02654	3.73%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	1.6895							
130.05	L-Lysine, Pre-col AQC Der (%)	4	4	1.6090	0.02647	1.6090	0.02647	0.01324	1.65%	0.02500	3.72%
130.99	L-Lysine, Miscellaneous (%)	5	5	1.6180	0.14733	1.6180	0.14733	0.06589	9.11%	0.04000	3.72%
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	19	0.50783	0.04895	0.51501	0.02308	0.00662	4.48%	0.01635	4.42%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.49700							
131.05	Methionine, PAO Pre-col AQC Der (%)	2	2	0.50820	0.03083						
131.99	Methionine, Miscellaneous (%)	4	4	0.52538	0.06213	0.52538	0.06213	0.03107	11.83%	0.01825	4.41%
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	18	1.3047	0.03359	1.3055	0.03566	0.01051	2.73%	0.01714	3.84%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	1.3010							
132.05	Phenylalanine, Pre-col AQC Der (%)	2	2	1.3100	0.07778						
132.99	Phenylalanine, Miscellaneous (%)	2	2	1.4375	0.10253						
133.00	Proline, Post-col Ninhydrin Der (%)	18	17	1.5816	0.07184	1.5728	0.04574	0.01387	2.91%	0.02494	3.74%
133.05	Proline, Pre-col AQC Der (%)	2	2	1.5725	0.01061						
133.99	Proline, Miscellaneous (%)	2	2	1.7175	0.20153						
134.00	Serine, Post-col Ninhydrin Der (%)	18	18	1.3086	0.07567	1.3190	0.05041	0.01485	3.82%	0.03932	3.84%
134.02	Serine, Post-col OPA Der (%)	1	1	1.2365							
134.05	Serine, Pre-col AQC Der (%)	2	2	1.3175	0.01061						
134.99	Serine, Miscellaneous (%)	2	2	1.6075	0.21567						
135.00	Threonine, Post-col Ninhydrin Der (%)	18	18	1.0526	0.03738	1.0502	0.03627	0.01069	3.45%	0.01828	3.97%
135.02	Threonine, Post-col OPA Der (%)	1	1	1.0500							

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135.05	Threonine, Pre-col AQC Der (%)	2	2	1.0675	0.01061						
135.99	Threonine, Miscellaneous (%)	2	2	1.1250	0.07778						
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	5	5	0.32768	0.05339	0.33605	0.05773	0.02887	17.18%	0.02024	4.71%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.35800	0.00707						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.34650							
136.03	Tryptophan, Alka-Hydrol + IS RP LC Fl (%)	4	4	0.34463	0.01636	0.34463	0.01636	0.00818	4.75%	0.00325	4.70%
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	12	0.84040	0.10525	0.85537	0.07788	0.02810	9.10%	0.02062	4.09%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.94800							
137.05	Tyrosine, Pre-col AQC Der (%)	2	2	0.98500	0.04243						
137.99	Tyrosine, Miscellaneous (%)	2	2	1.0375	0.06010						
138.00	Valine, Post-col Ninhydrin Der (%)	18	18	1.2921	0.05141	1.2921	0.05830	0.01718	4.51%	0.02720	3.85%
138.02	Valine, Post-col OPA Der (%)	1	1	1.3240							
138.05	Valine, Pre-col AQC Der (%)	2	2	1.3475	0.03182						
138.99	Valine, Miscellaneous (%)	2	2	1.3200	0.07778						
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.14750	0.00354						
139.02	Taurine, Post-col OPA Der (%)	1		0.00000							
160.99	Fructose, Miscellaneous (%)	4	4	0.36838	0.22368	0.31783	0.24439	0.14110	76.89%	0.03125	4.75%
162.99	Glucose, Miscellaneous (%)	3	2	0.14700	0.04667					0.00200	
163.99	Lactose, Miscellaneous (%)	3	1								
164.99	Maltose, Miscellaneous (%)	1		0.00000							
165.99	Sucrose, Miscellaneous (%)	5	5	3.7439	0.25292	3.7439	0.25292	0.11311	6.76%	0.11800	3.28%
166.99	Raffinose, Miscellaneous (%)	2	2	0.65450	0.09122						
167.99	Stachyose, Miscellaneous (%)	2	2	2.1775	0.18031						
348.05	Bacitracin, residual, LC-MS/MS (µg / kg (ppb))	1	1	22.420							
400.01	Water activity, Aqualab chilled mirror (Units)	6	6	0.48156	0.02069	0.48156	0.02347	0.01197	4.87%	0.00172	
400.99	Water activity, Miscellaneous (Units)	3	3	0.48567	0.00952	0.48567	0.00952	0.00549	1.96%	0.00533	
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	2	2	0.09175	0.03288						
516.43	Arsenic, total, ICP, Microwave (mg / kg (ppm))	1		0.00000							
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm	3	3	0.15783	0.07310	0.11675	0.02369	0.01675	20.29%	0.01433	22.00%
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm)	6	5	0.13048	0.03756	0.11435	0.01209	0.00676	10.57%	0.00784	22.00%
516.99	Arsenic, total, Miscellaneous (mg / kg (ppm))	1	1	180.05							
518.34	Cadmium, AAS, Graphite furnace (mg / kg (ppm))	1	1	0.07000							
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	2	2	0.04950	0.02899						
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	1		0.00000							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.06550	0.00778						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.10635	0.09492	0.06945	0.00610	0.00311	8.78%	0.00213	22.00%
518.99	Cadmium, Miscellaneous (mg / kg (ppm))	1	1	99.150							
520.31	Chromium, AAS, Dry ash (mg / kg (ppm))	2	2	1,265.3	1,769.2						

Test Material Code # 201630 **Issue Date : 11/30/2016**

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
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	2.2600	0.41012						
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	1	1	3.8950							
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	3	3	23.373	33.459	4.0594	0.99621	0.70442	24.54%	1.3832	12.96%
520.52	Chromium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	1.0533	0.77322						
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	4	4	17.718	31.546	1.9569	1.5182	0.87654	77.58%	0.10658	14.46%
526.34	Lead, AAS, Graphite furnace (mg / kg (ppm))	1	1	0.25500							
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2	2	0.19800	0.07354						
526.43	Lead, ICP, Microwave (mg / kg (ppm))	1	1	2.1500							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.28167	0.05033	0.28167	0.05033	0.02906	17.87%	0.04467	19.36%
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	6	6	0.51930	0.65256	0.27106	0.05966	0.03044	22.01%	0.03133	19.47%
526.99	Lead, Miscellaneous (mg / kg (ppm))	1	1	418.80							
529.99	Mercury, Miscellaneous (µg / kg (ppb))	1	1	7.4691							
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	1	1	2.8500							
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	2	2	121.60	167.45						
539.52	Nickel, ICP-MS, Open vessel (mg / kg (ppm))	2	2	2.5075	0.21567						
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	2	2	118.57	164.66						

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

AAFCO PTP Animal Feed Scheme

Animal Feed Scheme
Poultry/Game Bird Feed
Test Material Code # 201630

Method Precision Report

 # Methods Reported: 92
 # Labs Reporting: 204
Issue Date : 11/30/2016

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 (%)	43	38	8.4435	0.30475	0.30126	0.06502	0.30820	3.57%	0.770%	3.65%	4.7398
001.99	Loss on Drying, Miscellaneous (%)	19	18	8.1435	0.55739	0.54897	0.13645	0.56568	6.74%	1.676%	6.95%	4.1458
002.01	Protein, Auto Kjel-Foss (%)	14	13	27.497	0.28429	0.26929	0.12890	0.29855	0.98%	0.469%	1.09%	2.3161
002.05	Protein, Copper, Boric Acid (%)	32	28	27.535	0.26483	0.25848	0.08152	0.27103	0.94%	0.296%	0.98%	3.3246
002.06	Protein, Combustion Nitrogen Analyzer (%)	133	123	27.944	0.32193	0.30019	0.16445	0.34228	1.07%	0.589%	1.22%	2.0814
002.11	Protein, NIR (%)	10	9	28.540	1.6424	1.6391	0.14767	1.6457	5.74%	0.517%	5.77%	11.144
003.00	Fat, Eth Ext., Direct (%)	14	13	3.1586	0.16295	0.15165	0.08432	0.17351	4.80%	2.670%	5.49%	2.0578
003.06	Fat, Pet Ether (%)	20	16	3.0823	0.15369	0.14884	0.05417	0.15839	4.83%	1.757%	5.14%	2.9239
003.09	Fat, Soxtec, Eth Ext (%)	20	18	3.1683	0.13167	0.12201	0.07001	0.14067	3.85%	2.210%	4.44%	2.0093
003.10	Fat, Soxtec, Pet Ether (%)	30	29	3.0133	0.14919	0.14304	0.05996	0.15510	4.75%	1.990%	5.15%	2.5867
003.11	Fat, NIR (%)	10	10	3.0871	0.53231	0.53194	0.02829	0.53269	17.23%	0.916%	17.26%	18.832
003.13	Fat, Soxtec, Hexane Ext. (%)	12	12	3.2322	0.39632	0.38583	0.12809	0.40653	11.94%	3.963%	12.58%	3.1737
003.14	Fat, Ankom (%)	42	41	2.9391	0.24858	0.23497	0.11476	0.26149	7.99%	3.905%	8.90%	2.2786
004.00	Fiber, Crude, Asbestos Free (%)	17	16	4.9274	0.42911	0.41095	0.17465	0.44652	8.34%	3.544%	9.06%	2.5567
004.06	Fiber, Fibertec (%)	25	23	5.0406	0.34145	0.33128	0.11695	0.35132	6.57%	2.320%	6.97%	3.0040
004.07	Fiber, ANKOM (%)	67	62	4.7861	0.43420	0.41645	0.17378	0.45125	8.70%	3.631%	9.43%	2.5967
004.11	Fiber, NIR (%)	10	10	4.3478	0.65164	0.64968	0.07141	0.65359	14.94%	1.643%	15.03%	9.1523
005.00	Ash, 2h @ 600°C (%)	102	95	6.9336	0.21060	0.20557	0.06472	0.21552	2.96%	0.933%	3.11%	3.3299
005.05	Ash, 3h @ 550°C (%)	29	26	7.0854	0.17872	0.17621	0.04215	0.18118	2.49%	0.595%	2.56%	4.2985
005.99	Ash, Miscellaneous (%)	12	12	7.0800	0.22723	0.21557	0.10161	0.23832	3.04%	1.435%	3.37%	2.3453
008.02	Fiber, Acid Detergent (%)	16	13	6.6446	0.49983	0.49150	0.12845	0.50801	7.40%	1.933%	7.65%	3.9550
008.08	Fiber, Acid Detergent, ANKOM (%)	42	41	6.6009	0.70678	0.68741	0.23238	0.72562	10.41%	3.520%	10.99%	3.1226
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	12	10	13.670	1.1373	1.1195	0.28270	1.1547	8.19%	2.068%	8.45%	4.0845
009.09	Fiber, Neutral Detergent, ANKOM (%)	35	32	13.571	1.3910	1.3657	0.37299	1.4158	10.06%	2.748%	10.43%	3.7958
010.99	Moisture, Miscellaneous (%)	18	16	8.4861	0.49605	0.49020	0.10748	0.50184	5.78%	1.267%	5.91%	4.6692
011.01	Loss on Drying, 135°C 2hr (%)	74	69	9.1270	0.35658	0.35229	0.07800	0.36082	3.86%	0.855%	3.95%	4.6258
012.00	Starch, Polarimetric (Ewers) (%)	12	10	27.458	0.99097	0.98222	0.18573	0.99963	3.58%	0.676%	3.64%	5.3822
012.01	Starch, Megazyme (%)	8	8	22.479	1.8365	1.7836	0.61920	1.8880	7.93%	2.755%	8.40%	3.0491
013.00	Fat, Acid hydrolysis (%)	22	21	3.9929	0.43738	0.42570	0.14195	0.44874	10.66%	3.555%	11.24%	3.1613
013.02	Fat, Mojonnier, Bak Ext (%)	19	17	4.3783	0.50738	0.48899	0.19141	0.52512	11.17%	4.372%	11.99%	2.7434
019.00	Calcium, Ox-Mn04 Vol. (%)	12	11	1.3220	0.06888	0.06851	0.01017	0.06926	5.18%	0.769%	5.24%	6.8118
019.31	Calcium, AAS, Dry ash (%)	31	28	1.2892	0.05410	0.05044	0.02766	0.05753	3.91%	2.145%	4.46%	2.0799

Test Material Code # 201630 **Issue Date : 11/30/2016**

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
019.41	Calcium, ICP, Dry ash (%)	32	29	1.3141	0.05141	0.04889	0.02246	0.05380	3.72%	1.709%	4.09%	2.3958
019.42	Calcium, ICP, Open vessel (%)	24	21	1.3371	0.09461	0.09191	0.03175	0.09724	6.87%	2.375%	7.27%	3.0625
019.43	Calcium, ICP, Microwave (%)	21	20	1.3234	0.08121	0.07896	0.02689	0.08341	5.97%	2.032%	6.30%	3.1017
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	17	15	19.802	1.1899	1.1737	0.27736	1.2060	5.93%	1.401%	6.09%	4.3482
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	21	20	20.032	1.3443	1.1231	1.0449	1.5340	5.61%	5.216%	7.66%	1.4680
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	23	20	19.515	2.8488	2.8207	0.56521	2.8767	14.45%	2.896%	14.74%	5.0897
022.43	Copper, ICP, Microwave (mg / kg (ppm))	19	17	19.776	2.0085	1.9696	0.55656	2.0467	9.96%	2.814%	10.35%	3.6774
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	18	18	207.59	30.134	29.922	5.0564	30.346	14.41%	2.436%	14.62%	6.0015
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	18	202.64	6.8651	5.9355	4.8784	7.6830	2.93%	2.407%	3.79%	1.5749
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	19	16	188.95	26.657	26.351	5.6949	26.960	13.95%	3.014%	14.27%	4.7340
025.43	Iron, ICP, Microwave (mg / kg (ppm))	20	19	202.76	20.650	20.484	3.6980	20.815	10.10%	1.824%	10.27%	5.6288
027.31	Magnesium, AAS, Dry ash (%)	21	20	0.23730	0.01101	0.01046	0.00486	0.01153	4.41%	2.047%	4.86%	2.3744
027.41	Magnesium, ICP, Dry ash (%)	27	24	0.24193	0.00840	0.00794	0.00391	0.00885	3.28%	1.617%	3.66%	2.2617
027.42	Magnesium, ICP, Open vessel (%)	24	20	0.24449	0.01362	0.01299	0.00575	0.01421	5.32%	2.351%	5.81%	2.4724
027.43	Magnesium, ICP, Microwave (%)	21	19	0.24159	0.01415	0.01387	0.00398	0.01443	5.74%	1.648%	5.97%	3.6242
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	16	16	111.13	6.7116	6.5586	2.0148	6.8611	5.90%	1.813%	6.17%	3.4053
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	23	22	107.06	7.5755	7.1729	3.4460	7.9577	6.70%	3.219%	7.43%	2.3093
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	23	23	110.04	15.117	14.665	5.1905	15.556	13.33%	4.717%	14.14%	2.9970
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	20	17	112.49	5.8593	5.7319	1.7186	5.9840	5.10%	1.528%	5.32%	3.4819
031.01	Phosphorus, Photometric (%)	46	41	0.72047	0.03293	0.03250	0.00747	0.03335	4.51%	1.036%	4.63%	4.4659
031.41	Phosphorus, ICP, Dry ash (%)	31	28	0.72323	0.03480	0.03355	0.01306	0.03600	4.64%	1.805%	4.98%	2.7574
031.42	Phosphorus, ICP, Open vessel (%)	24	23	0.73229	0.03893	0.03647	0.01924	0.04124	4.98%	2.627%	5.63%	2.1436
031.43	Phosphorus, ICP, Microwave (%)	22	21	0.73323	0.03580	0.03482	0.01178	0.03676	4.75%	1.606%	5.01%	3.1207
032.31	Potassium, AAS, Dry ash (%)	18	14	1.3192	0.09876	0.09819	0.01500	0.09933	7.44%	1.137%	7.53%	6.6205
032.41	Potassium, ICP, Dry ash (%)	24	22	1.3581	0.06267	0.05976	0.02668	0.06545	4.40%	1.964%	4.82%	2.4534
032.42	Potassium, ICP, Open vessel (%)	22	20	1.4192	0.05887	0.04907	0.04599	0.06725	3.46%	3.240%	4.74%	1.4625
032.43	Potassium, ICP, Microwave (%)	19	19	1.3904	0.08965	0.08861	0.01922	0.09067	6.37%	1.382%	6.52%	4.7180
033.00	Salt as chloride, Sol Cl (%)	22	19	0.35251	0.05960	0.05899	0.01201	0.06020	16.74%	3.408%	17.08%	5.0117
033.01	Salt as chloride, Poten Cl (%)	33	30	0.37008	0.02814	0.02756	0.00804	0.02870	7.45%	2.172%	7.76%	3.5706
033.99	Salt, Miscellaneous (%)	9	8	0.34675	0.05012	0.04468	0.03211	0.05502	12.88%	9.261%	15.87%	1.7133
035.31	Sodium, AAS, Dry ash (%)	23	21	0.12274	0.01283	0.01256	0.00373	0.01310	10.23%	3.036%	10.67%	3.5146
035.41	Sodium, ICP, Dry ash (%)	25	23	0.12420	0.00956	0.00894	0.00479	0.01014	7.20%	3.855%	8.17%	2.1188
035.42	Sodium, ICP, Open vessel (%)	20	19	0.12265	0.01026	0.00930	0.00613	0.01114	7.59%	4.999%	9.09%	1.8173
035.43	Sodium, ICP, Microwave (%)	19	18	0.12084	0.01281	0.01208	0.00603	0.01350	10.00%	4.989%	11.18%	2.2402
036.42	Sulfur, ICP, Open vessel (%)	20	20	0.30608	0.01638	0.01406	0.01188	0.01840	4.59%	3.881%	6.01%	1.5495
036.43	Sulfur, ICP, Microwave (%)	12	11	0.31593	0.02536	0.02422	0.01060	0.02644	7.67%	3.356%	8.37%	2.4938
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	18	16	128.79	11.279	11.225	1.5663	11.334	8.72%	1.216%	8.80%	7.2362
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	23	20	128.57	8.2213	7.9581	2.9184	8.4764	6.19%	2.270%	6.59%	2.9045
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	22	19	130.51	9.6669	9.4923	2.5863	9.8384	7.27%	1.982%	7.54%	3.8041
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	22	19	132.49	8.0176	7.6951	3.1832	8.3276	5.81%	2.403%	6.29%	2.6161

Test Material Code # 201630 **Issue Date : 11/30/2016**

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
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	9	9	3.0086	0.81637	0.81020	0.14170	0.82250	26.93%	4.710%	27.34%	5.8046
106.02	Vitamin A, LC (KU / kg)	22	19	16.904	4.2357	4.2147	0.59595	4.2566	24.93%	3.525%	25.18%	7.1425
109.02	Vitamin E, LC (IU/kg)	20	18	65.823	14.293	14.253	1.5234	14.334	21.65%	2.314%	21.78%	9.4093
120.00	Alanine, Post-col Ninhydrin Der (%)	18	16	1.3311	0.03666	0.03590	0.01051	0.03740	2.70%	0.790%	2.81%	3.5586
121.00	Arginine, Post-col Ninhydrin Der (%)	18	18	1.8552	0.06124	0.05752	0.02972	0.06475	3.10%	1.602%	3.49%	2.1788
122.00	Aspartic, Post-col Ninhydrin Der (%)	18	15	2.8784	0.05663	0.05365	0.02565	0.05946	1.86%	0.891%	2.07%	2.3182
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	18	16	0.38436	0.02237	0.02184	0.00681	0.02288	5.68%	1.771%	5.95%	3.3614
125.00	Glutamic, Post-col Ninhydrin Der (%)	18	17	4.8035	0.11066	0.10532	0.04801	0.11575	2.19%	0.999%	2.41%	2.4111
126.00	Glycine, Post-col Ninhydrin Der (%)	18	17	1.3662	0.03728	0.03594	0.01401	0.03857	2.63%	1.026%	2.82%	2.7529
127.00	Histidine, Post-col Ninhydrin Der (%)	17	15	0.70491	0.01165	0.01082	0.00611	0.01243	1.54%	0.867%	1.76%	2.0343
128.00	Isoleucine, Post-col Ninhydrin Der (%)	17	16	1.1636	0.02951	0.02643	0.01855	0.03229	2.27%	1.594%	2.77%	1.7411
129.00	Leucine, Post-col Ninhydrin Der (%)	18	16	2.1053	0.04719	0.04573	0.01647	0.04861	2.17%	0.782%	2.31%	2.9509
130.00	L-Lysine, Post-col Ninhydrin Der (%)	19	17	1.6086	0.05384	0.05268	0.01575	0.05498	3.27%	0.979%	3.42%	3.4920
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	19	18	0.51744	0.02612	0.02385	0.01507	0.02821	4.61%	2.912%	5.45%	1.8724
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	18	17	1.3061	0.03404	0.03281	0.01284	0.03523	2.51%	0.983%	2.70%	2.7433
133.00	Proline, Post-col Ninhydrin Der (%)	18	15	1.5648	0.04100	0.03935	0.01631	0.04259	2.51%	1.042%	2.72%	2.6112
134.00	Serine, Post-col Ninhydrin Der (%)	18	16	1.3187	0.05276	0.04899	0.02769	0.05627	3.72%	2.100%	4.27%	2.0324
135.00	Threonine, Post-col Ninhydrin Der (%)	18	17	1.0470	0.02985	0.02773	0.01563	0.03183	2.65%	1.493%	3.04%	2.0362
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	10	0.87946	0.04778	0.04667	0.01449	0.04887	5.31%	1.648%	5.56%	3.3712
138.00	Valine, Post-col Ninhydrin Der (%)	18	17	1.2967	0.04914	0.04646	0.02263	0.05168	3.58%	1.745%	3.99%	2.2838

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