



AAFCO
Proficiency Testing Program



Animal Feed Scheme

Dry Dog Food

Test Material Code # 201721

Method Summary Report

(Precision Report Follows)

Methods Reported: 372

Labs Reporting: 187

Issue Date : 02/28/2017

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value - Robust Mean	AAFCO PT fp - Robust sd	Uncertainty (U) - Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
000.02	Urea, As protein, Colorimetric (%)	1	1	0.20000							
001.00	Loss on Drying, Vac 95°C 5 hr (%)	6	6	6.0445	0.32327	6.0622	0.32476	0.16573	5.36%	0.06023	3.05%
001.03	Loss on Drying, Low temp. methods (%)	4	4	6.2090	0.12187	6.2090	0.12187	0.06094	1.96%	0.02548	3.04%
001.05	Loss on Drying, LECO (%)	2	2	5.9075	0.01768						
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	38	38	6.1645	0.62197	6.1662	0.24138	0.04895	3.91%	0.14446	3.04%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	2	2	6.0125	0.08839						
001.99	Loss on Drying, Miscellaneous (%)	19	19	6.0057	0.59116	6.1595	0.21462	0.06155	3.48%	0.12215	3.04%
002.00	Protein, Crude (%)	6	6	28.815	0.87564	28.815	0.99297	0.50672	3.45%	0.36700	1.86%
002.01	Protein, Auto Kjel-Foss (%)	12	12	28.352	0.53308	28.420	0.41920	0.15127	1.48%	0.12083	1.88%
002.02	Protein, Semiauto Autoanalyzer (%)	3	3	28.486	0.37817	28.486	0.37817	0.21834	1.33%	0.22760	1.87%
002.03	Protein, Hach Method (%)	1	1	28.130							
002.04	Protein, Copper Catalyst (%)	6	6	28.358	0.80782	28.358	0.91607	0.46748	3.23%	0.12333	1.88%
002.05	Protein, Copper, Boric Acid (%)	24	24	28.592	0.58775	28.508	0.26381	0.06731	0.93%	0.10705	1.87%
002.06	Protein, Combustion Nitrogen Analyzer (%)	124	124	28.516	2.5286	28.836	0.28564	0.03206	0.99%	0.24554	1.86%
002.08	Protein, Cu/Ti (%)	2	2	28.490	0.41012						
002.10	Protein, Block dig/distillation (%)	1	1	28.755							
002.11	Protein, NIR (%)	7	7	27.011	2.6079	27.685	1.1194	0.52885	4.04%	0.06514	1.90%
002.99	Protein, Miscellaneous (%)	2	2	29.169	0.39068						
003.00	Fat, Eth Ext., Direct (%)	11	11	9.1128	1.2751	8.6861	0.40472	0.15254	4.66%	0.11670	2.89%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	1	1	8.8400							
003.06	Fat, Pet Ether (%)	15	15	8.6099	1.5197	8.7011	0.21950	0.07084	2.52%	0.09653	2.89%
003.09	Fat, Soxtec, Eth Ext (%)	13	13	8.6131	0.29441	8.6232	0.26149	0.09066	3.03%	0.13469	2.89%
003.10	Fat, Soxtec, Pet Ether (%)	29	29	8.5287	0.26796	8.5171	0.25826	0.05995	3.03%	0.12117	2.90%
003.11	Fat, NIR (%)	5	5	9.9342	3.4873	9.9342	3.4873	1.5596	35.10%	0.25240	2.83%
003.12	Fat, Hexane Ext (%)	2	2	8.6425	0.00354						
003.13	Fat, Soxtec, Hexane Ext. (%)	6	6	9.3067	1.8043	8.6267	0.18581	0.09482	2.15%	0.11400	2.89%
003.14	Fat, Ankom (%)	31	31	8.6821	0.79806	8.5269	0.17861	0.04010	2.09%	0.21605	2.90%
003.99	Fat, Miscellaneous (%)	4	4	11.396	1.8802	11.396	1.8802	1.0855	16.50%	0.27750	2.77%
004.00	Fiber, Crude, Asbestos Free (%)	15	15	3.6033	0.35713	3.5875	0.29349	0.09472	8.18%	0.07467	3.30%
004.01	Fiber, Sing Filt (%)	1	1	3.2500							

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004.03	Fiber, Fritted Glass (%)	6	6	3.4400	0.57906	3.4466	0.64122	0.32722	18.60%	0.21000	3.32%
004.06	Fiber, Fibertec (%)	22	22	3.7953	0.45943	3.7275	0.27757	0.07397	7.45%	0.09667	3.28%
004.07	Fiber, ANKOM (%)	55	55	4.0491	0.70866	4.0040	0.67669	0.11406	16.90%	0.14286	3.25%
004.11	Fiber, NIR (%)	4	4	2.3709	0.32062	2.3709	0.32062	0.16031	13.52%	0.12783	3.51%
004.99	Fiber, Miscellaneous (%)	3	3	3.4617	0.39435	3.4617	0.39435	0.22768	11.39%	0.07000	3.32%
005.00	Ash, 2h @ 600°C (%)	87	87	6.0189	0.23884	5.9924	0.10178	0.01364	1.70%	0.06478	3.05%
005.02	Ash, LECO (%)	1	1	1.1423							
005.05	Ash, 3h @ 550°C (%)	20	20	5.9729	0.10446	5.9773	0.07782	0.02175	1.30%	0.04923	3.06%
005.11	Ash, NIR (%)	4	4	7.2314	1.3273	7.2314	1.3273	0.66365	18.35%	0.28958	2.97%
005.99	Ash, Miscellaneous (%)	12	12	5.9802	0.08544	5.9802	0.09689	0.03496	1.62%	0.04385	3.06%
006.00	Total sugars, As sucrose (%)	1	1	1.0300							
006.01	Total sugars, Mod. Fehling Soln (%)	2	2	1.4938	0.83969						
006.99	Total sugars, Miscellaneous (%)	2	2	1.0441	0.50328						
008.02	Fiber, Acid Detergent (%)	15	15	5.1154	0.46455	5.0964	0.48236	0.15568	9.46%	0.22749	3.13%
008.05	Fiber, Acid Detergent-Hach (%)	1	1	6.7000							
008.08	Fiber, Acid Detergent, ANKOM (%)	39	39	5.5432	1.0828	5.5163	1.1680	0.23379	21.17%	0.28707	3.09%
008.99	Fiber, Acid Detergent Miscellaneous (%)	2	2	4.5400	0.01414						
009.04	Fiber, Neutral Det-No ENZ Pretreat (%)	1	1	10.170							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	9	9	8.8617	3.6207	9.5095	2.3329	0.97203	24.53%	0.23667	2.85%
009.09	Fiber, Neutral Detergent, ANKOM (%)	31	31	10.843	2.2453	10.645	1.9851	0.44567	18.65%	0.40524	2.80%
009.99	Fiber, Neutral Det Miscellaneous (%)	2	2	10.550	1.0253						
010.03	Moisture, Karl-Fischer (%)	3	3	6.2000	0.35203	6.2000	0.35203	0.20324	5.68%	0.20000	3.04%
010.11	Moisture, NIR (%)	4	4	6.1094	0.80378	6.1094	0.80378	0.40189	13.16%	0.22758	3.05%
010.99	Moisture, Miscellaneous (%)	14	14	6.2552	0.30387	6.2766	0.29070	0.09712	4.63%	0.10064	3.03%
011.01	Loss on Drying, 135°C 2hr (%)	67	67	6.4915	0.41432	6.5625	0.20512	0.03132	3.13%	0.11797	3.01%
011.02	Loss on Drying, 130°C for 2 hours (%)	4	4	6.7569	0.72633	6.7569	0.72633	0.36317	10.75%	0.24325	3.00%
011.99	Loss on Drying, High Temp. Methods Miscellaneo	4	4	6.5713	0.17495	6.5713	0.17495	0.08748	2.66%	0.12750	3.01%
012.00	Starch, Polarimetric (Ewers) (%)	6	6	35.500	1.3847	35.500	1.5702	0.80131	4.42%	0.64333	1.68%
012.01	Starch, Megazyme (%)	9	9	33.204	2.8510	33.641	2.0751	0.86462	6.17%	1.2708	1.72%
012.02	Starch, Colorimetric (GOP) (%)	1	1	39.265							
012.03	Starch, Enzymatic (%)	4	4	31.651	2.7904	31.651	2.7904	1.3952	8.82%	0.47475	1.78%
012.04	Starch, YSI Analyzer (%)	5	5	33.034	2.5382	33.034	2.5382	1.2691	7.68%	0.67200	1.74%
012.11	Starch, NIR (%)	3	3	34.776	0.62147	34.776	0.62147	0.35881	1.79%	0.21900	1.70%
012.99	Starch, Miscellaneous (%)	1	1	39.745							
013.00	Fat, Acid hydrolysis (%)	18	18	11.880	2.1030	11.991	0.34822	0.10259	2.90%	0.25944	2.75%
013.02	Fat, Mojonier, Bak Ext (%)	34	34	12.434	0.82134	12.312	0.36539	0.07833	2.97%	0.30449	2.74%
013.08	Fat, Roese-Gottlieb Modified (%)	2	2	10.594	0.28850						
013.10	Fat, Soxtec-Acid Hydrolysis (%)	11	11	11.168	0.61801	11.229	0.54522	0.20549	4.86%	0.28779	2.78%

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013.12	Fat, NIR- Acid Hydrolysis (%)	2	2	10.910	1.8526						
013.13	Fat, Ankom- Acid Hydrolysis (%)	6	6	11.528	0.53617	11.539	0.58282	0.29742	5.05%	0.28800	2.77%
014.99	Fiber, total dietary TDF, Miscellaneous (%)	1	1	10.550							
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	4	4	42.601	19.502	42.601	19.502	9.7510	45.78%	2.7098	9.09%
015.42	Aluminum, ICP, Open vessel (mg / kg (ppm))	1	1	64.250							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	6	6	66.069	10.907	66.069	12.369	6.3120	18.72%	1.8290	8.51%
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	4	3	1.6867	0.49286	1.6867	0.49286	0.28455	29.22%	0.15333	14.79%
017.42	Boron, ICP, Open vessel (mg / kg (ppm))	5	5	2.7940	0.79979	2.7940	0.79979	0.39990	28.63%	0.18800	13.70%
017.43	Boron, ICP, Microwave (mg / kg (ppm))	5	4	2.8300	0.23580	2.8300	0.23580	0.13614	8.33%	0.63000	13.68%
019.00	Calcium, Ox-Mn04 Vol. (%)	11	11	1.1287	0.09553	1.1287	0.10833	0.04083	9.60%	0.02637	3.93%
019.02	Calcium, Hach Method (%)	2	2	1.0723	0.12339						
019.03	Calcium, Semiauto (Autoanalyzer) (%)	1	1	1.1323							
019.08	Calcium, EDTA (%)	9	9	1.1153	0.16632	1.0711	0.04054	0.01689	3.79%	0.02436	3.96%
019.09	Calcium, Ion-selective electrode (%)	1	1	1.1600							
019.31	Calcium, AAS, Dry ash (%)	23	23	1.0994	0.07188	1.0968	0.07023	0.01831	6.40%	0.03513	3.94%
019.32	Calcium, AAS, Open vessel (%)	4	4	1.0988	0.04810	1.0988	0.04810	0.02405	4.38%	0.01255	3.94%
019.33	Calcium, AAS, Microwave (%)	3	3	1.0961	0.13648	1.0961	0.13648	0.07880	12.45%	0.05190	3.94%
019.34	Calcium, AAS, Dry ash (%)	1	1	1.0800							
019.41	Calcium, ICP, Dry ash (%)	26	26	1.0814	0.09034	1.0915	0.06087	0.01492	5.58%	0.02033	3.95%
019.42	Calcium, ICP, Open vessel (%)	21	21	1.1089	0.10046	1.1151	0.09593	0.02617	8.60%	0.04988	3.93%
019.43	Calcium, ICP, Microwave (%)	22	22	484.05	2,265.1	1.1127	0.05307	0.01414	4.77%	4.0994	3.94%
019.44	Calcium, ICP, Dry ash (%)	2	2	1.0636	0.10105						
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	1.0558							
019.53	Calcium, ICP-MS, Microwave (%)	3	3	0.97613	0.26113	0.97613	0.26113	0.15076	26.75%	0.01967	4.01%
019.99	Calcium, Miscellaneous (%)	3	3	1.0480	0.11986	1.0480	0.11986	0.06920	11.44%	0.01600	3.97%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	2	2	0.80000	0.14142						
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	2	2	0.96173	0.08729						
021.42	Cobalt, ICP, Open vessel (mg / kg (ppm))	2	2	0.67225	0.08026						
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	5	5	0.93432	0.12942	0.93432	0.12942	0.06471	13.85%	0.06380	16.16%
021.52	Cobalt, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.42500							
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	2	2	0.43130	0.07326						
021.99	Cobalt, Miscellaneous (mg / kg (ppm))	1	1	1.4250							
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	10	10	17.705	4.3859	18.582	2.4069	0.95142	12.95%	0.87700	10.30%
022.32	Copper, AAS, Open vessel (mg / kg (ppm))	3	3	19.145	4.1602	19.145	4.1602	2.4019	21.73%	0.96933	10.26%
022.33	Copper, AAS, Microwave (mg / kg (ppm))	2	2	18.298	2.3377						
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	19	19	61.624	183.78	19.535	2.2598	0.64805	11.57%	5.4636	10.23%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	19	19	18.578	1.1531	18.536	1.2087	0.34662	6.52%	0.72084	10.31%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	18	18	18.786	2.0899	18.449	1.5133	0.44586	8.20%	1.1381	10.32%

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022.44	Copper, ICP, Dry ash (mg / kg (ppm))	1	1	20.807							
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	2	2	18.725	0.81317						
022.99	Copper, Miscellaneous (mg / kg (ppm))	3	3	17.533	1.0504	17.533	1.0504	0.60645	5.99%	0.86667	10.40%
023.01	Fluorine, Ion Sel Elect (mg / kg (ppm))	1	1	23.850							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	13	13	385.08	356.09	292.23	46.054	15.966	15.76%	7.9392	6.81%
025.32	Iron, AAS, Open vessel (mg / kg (ppm))	2	2	280.27	11.562						
025.33	Iron, AAS, Microwave (mg / kg (ppm))	1	1	262.00							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	19	985.08	3,033.7	290.67	18.494	5.3035	6.36%	1,406.0	6.81%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	16	16	262.60	56.157	274.01	33.092	10.341	12.08%	9.6694	6.87%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	18	18	281.05	31.008	284.43	22.596	6.6573	7.94%	6.0317	6.83%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	303.25							
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	1	1	174.50							
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	290.00	4.0927	290.00	4.0927	2.3629	1.41%	14.667	6.81%
027.31	Magnesium, AAS, Dry ash (%)	14	14	0.12707	0.00916	0.12592	0.00675	0.00226	5.36%	0.00323	5.46%
027.32	Magnesium, AAS, Open vessel (%)	4	4	0.24204	0.23865	0.24204	0.23865	0.16875	98.60%	0.00638	4.95%
027.33	Magnesium, AAS, Microwave (%)	3	3	0.12133	0.00551	0.12133	0.00551	0.00318	4.54%	0.00727	5.49%
027.41	Magnesium, ICP, Dry ash (%)	21	21	0.13626	0.04822	0.12643	0.00749	0.00204	5.93%	0.00508	5.46%
027.42	Magnesium, ICP, Open vessel (%)	17	17	0.13085	0.00866	0.13080	0.00972	0.00295	7.43%	0.00421	5.43%
027.43	Magnesium, ICP, Microwave (%)	18	18	63.802	270.12	0.12775	0.00902	0.00266	7.06%	0.50274	5.45%
027.44	Magnesium, ICP, Dry ash (%)	2	2	0.12010	0.01047						
027.52	Magnesium, ICP-MS, Open vessel (%)	1	1	0.12365							
027.53	Magnesium, ICP-MS, Microwave (%)	1	1	0.13250							
027.99	Magnesium, Miscellaneous (%)	4	4	0.12375	0.01109	0.12375	0.01109	0.00640	8.96%	0.00250	5.48%
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	10	10	78.215	7.9491	78.649	7.9983	3.1616	10.17%	2.5800	8.29%
028.32	Manganese, AAS, Open vessel (mg / kg (ppm))	3	3	88.569	4.7289	88.569	4.7289	2.7302	5.34%	2.4500	8.15%
028.33	Manganese, AAS, Microwave (mg / kg (ppm))	3	3	79.154	10.054	79.154	10.054	5.8047	12.70%	3.3870	8.29%
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	19	18	83.083	4.0777	82.618	3.4556	1.0181	4.18%	1.5199	8.23%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	19	120.28	159.44	84.494	7.2360	2.0751	8.56%	3.6147	8.20%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	19	19	85.685	11.482	83.684	4.3835	1.2571	5.24%	2.0503	8.22%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	2	2	82.537	3.3415						
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	1	1	87.450							
028.99	Manganese, Miscellaneous (mg / kg (ppm))	3	3	83.800	2.6211	83.800	2.6211	1.5133	3.13%	3.6667	8.21%
031.01	Phosphorus, Photometric (%)	40	40	0.94407	0.05255	0.94267	0.03270	0.00646	3.47%	0.02113	4.04%
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	3	3	0.99500	0.03279	0.99500	0.03279	0.01893	3.30%	0.01000	4.00%
031.03	Phosphorus, Autoanalyzer (%)	4	4	0.95275	0.03208	0.95275	0.03208	0.01852	3.37%	0.01170	4.03%
031.06	Phosphorus, Hach Method (%)	2	2	0.91975	0.02793						
031.41	Phosphorus, ICP, Dry ash (%)	24	24	0.96044	0.06228	0.95697	0.04108	0.01048	4.29%	0.01837	4.03%
031.42	Phosphorus, ICP, Open vessel (%)	22	22	0.93331	0.06471	0.93371	0.05875	0.01566	6.29%	0.03371	4.04%

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031.43	Phosphorus, ICP, Microwave (%)	22	22	314.34	1,469.8	0.98392	0.05749	0.01532	5.84%	150.76	4.01%
031.44	Phosphorus, ICP, Dry ash (%)	2	2	1.0070	0.05162						
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.90535							
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	1.0182	0.02383						
031.99	Phosphorus, Miscellaneous (%)	4	4	0.92375	0.03010	0.92375	0.03010	0.01505	3.26%	0.01500	4.05%
032.02	Potassium, Flame Emission (%)	2	2	0.63500	0.00000						
032.31	Potassium, AAS, Dry ash (%)	15	15	0.64372	0.06183	0.65415	0.04228	0.01365	6.46%	0.01693	4.26%
032.32	Potassium, AAS, Open vessel (%)	2	2	0.63208	0.01001						
032.33	Potassium, AAS, Microwave (%)	1	1	0.64000							
032.41	Potassium, ICP, Dry ash (%)	23	23	0.87312	1.0311	0.66198	0.04555	0.01187	6.88%	0.03771	4.26%
032.42	Potassium, ICP, Open vessel (%)	19	19	0.66108	0.06430	0.67033	0.03405	0.00976	5.08%	0.02358	4.25%
032.43	Potassium, ICP, Microwave (%)	18	18	352.28	1,491.7	0.66597	0.04241	0.01250	6.37%	7.0464	4.25%
032.44	Potassium, ICP, Dry ash (%)	2	2	0.62380	0.03847						
032.52	Potassium, ICP-MS, Open vessel (%)	1	1	0.64290							
032.53	Potassium, ICP-MS, Microwave (%)	1	1	0.69150							
032.99	Potassium, Miscellaneous (%)	4	4	0.64600	0.05634	0.64600	0.05634	0.02817	8.72%	0.00450	4.27%
033.00	Salt as chloride, Sol Cl (%)	16	16	1.1099	0.21283	1.1603	0.12726	0.03977	10.97%	0.01571	3.91%
033.01	Salt as chloride, Poten Cl (%)	21	21	1.2286	0.18098	1.2654	0.03235	0.00882	2.56%	0.00895	3.86%
033.03	Salt as chloride, Quantab (%)	3	3	1.1817	0.10751	1.1817	0.10751	0.07602	9.10%	0.00333	3.90%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	1.2350	0.02121						
033.99	Salt, Miscellaneous (%)	6	6	1.2117	0.25717	1.2078	0.28251	0.14417	23.39%	0.06667	3.89%
034.01	Selenium, Fluor (mg / kg (ppm))	1	1	0.73450							
034.04	Selenium, AA, Hydride (mg / kg (ppm))	5	5	0.70790	0.20348	0.70790	0.20348	0.09100	28.74%	0.08300	16.85%
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	1	1	0.52755							
034.42	Selenium, ICP, Open vessel (mg / kg (ppm))	2	2	1.2425	0.66114						
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	2	2	0.44138	0.35946						
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	3	3	0.88367	0.16589	0.88367	0.16589	0.09578	18.77%	0.07133	16.30%
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	3	3	1.0252	0.21389	1.0252	0.21389	0.12349	20.86%	0.06870	15.94%
035.01	Sodium, Ion-selective electrode (%)	5	5	0.43270	0.05846	0.43270	0.05846	0.02923	13.51%	0.01340	4.54%
035.02	Sodium, Em Spect (%)	1	1	0.42000							
035.05	Sodium, Flame Emission (%)	3	3	0.40300	0.02553	0.40300	0.02553	0.01474	6.33%	0.00933	4.59%
035.31	Sodium, AAS, Dry ash (%)	13	13	0.43001	0.05235	0.42621	0.04989	0.01730	11.71%	0.00816	4.55%
035.32	Sodium, AAS, Open vessel (%)	2	2	0.40165	0.03062						
035.33	Sodium, AAS, Microwave (%)	1	1	0.41500							
035.41	Sodium, ICP, Dry ash (%)	26	25	0.41699	0.02898	0.41526	0.02906	0.00726	7.00%	0.00771	4.57%
035.42	Sodium, ICP, Open vessel (%)	17	17	0.41591	0.02914	0.41751	0.02928	0.00888	7.01%	0.01636	4.56%
035.43	Sodium, ICP, Microwave (%)	17	17	216.19	889.69	0.40947	0.03120	0.00946	7.62%	3.8170	4.57%
035.52	Sodium, ICP-MS, Open vessel (%)	1	1	0.41390							

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035.53	Sodium, ICP-MS, Microwave (%)	3	3	0.37692	0.10127	0.37692	0.10127	0.05847	26.87%	0.01177	4.63%
035.99	Sodium, Miscellaneous (%)	4	4	0.37875	0.07296	0.37875	0.07296	0.04212	19.26%	0.01250	4.63%
036.00	Sulfur, Gravimetric (%)	1	1	0.37050							
036.04	Sulfur, LECO (%)	4	4	0.37625	0.02175	0.37625	0.02175	0.01088	5.78%	0.02250	4.63%
036.42	Sulfur, ICP, Open vessel (%)	17	17	1.4123	4.3745	0.35310	0.02863	0.00868	8.11%	2.1303	4.68%
036.43	Sulfur, ICP, Microwave (%)	13	13	258.57	931.00	0.36753	0.02509	0.00870	6.83%	2.6941	4.65%
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	3,779.5							
036.99	Sulfur, Miscellaneous (%)	2	2	0.37200	0.04525						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	10	10	460.66	399.67	300.20	28.639	11.320	9.54%	7.0000	6.78%
037.32	Zinc, AAS, Open vessel (mg / kg (ppm))	2	2	278.98	9.1570						
037.33	Zinc, AAS, Microwave (mg / kg (ppm))	1	1	276.65							
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	19	19	464.35	772.14	288.63	14.046	4.0281	4.87%	71.062	6.82%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	16	16	275.28	33.502	278.41	21.468	6.7086	7.71%	18.058	6.86%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	20	20	289.12	21.253	288.93	16.120	4.5057	5.58%	6.4331	6.82%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	1	1	259.22							
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	1	1	307.00							
037.99	Zinc, Miscellaneous (mg / kg (ppm))	5	5	289.20	23.708	289.20	23.708	10.603	8.20%	4.4000	6.82%
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	3	3	0.77362	0.07028	0.77362	0.07028	0.04970	9.08%	0.01290	16.63%
038.42	Molybdenum, ICP, Open vessel (mg / kg (ppm))	3	3	0.88967	0.23501	0.88967	0.23501	0.13568	26.42%	0.13333	16.28%
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	7	7	1.1865	1.2028	0.85386	0.44493	0.21021	52.11%	0.12159	16.38%
038.52	Molybdenum, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.77000							
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.81458	0.16881	0.81458	0.16881	0.09746	20.72%	0.02290	16.50%
040.42	Barium, ICP, Open vessel (mg / kg (ppm))	1	1	5.8400							
040.43	Barium, ICP, Microwave (mg / kg (ppm))	1	1	4.6890							
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	1	1	5.5026							
042.00	Chloride, Titrimetric (%)	2	2	0.91250	0.23688						
042.02	Chloride, Ion Chromatography (%)	1	1	0.60500							
042.99	Chloride, Miscellaneous (%)	2	2	3.6575	3.6522						
101.01	Choline Chloride, Chem (mg / kg (ppm))	2	2	2,393.3	566.75						
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	2,105.0							
101.99	Choline Chloride, Miscellaneous (mg / kg (ppm))	1	1	786.18							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	149.50							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	35.000							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	42.050							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	1	1	14.350							
104.03	Riboflavin, LC (mg / kg (ppm))	2	2	13.880	3.4931						
105.00	Thiamine, LC (mg / kg (ppm))	3	3	23.893	5.8421	23.893	5.8421	4.1310	24.45%	1.6867	9.92%
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	24.750							

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106.00	Vitamin A, Color (KU / kg)	1	1	33.998							
106.01	Vitamin A, UV (KU / kg)	1	1	20.100							
106.02	Vitamin A, LC (KU / kg)	21	21	20.376	7.3141	19.695	4.7401	1.2930	24.07%	1.5433	
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1	1	145.00							
108.02	Vitamin D3, LC (KU / kg)	3	3	2.2130	2.6247	2.2130	2.6247	1.5154	118.60%	0.09400	
109.02	Vitamin E, LC (IU/kg)	15	15	593.51	83.816	593.51	95.047	30.676	16.01%	12.423	
109.99	Vitamin E, Miscellaneous (IU/kg)	1	1	595.50							
111.00	Vitamin C, phosphorylated, LC (mg / kg (ppm))	1	1	92.450							
112.01	Pyridoxine, LC (µg / g)	1	1	13.550							
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	3.3950							
114.99	Biotin, Miscellaneous (mg / kg (ppm))	3	3	0.75992	1.1716	0.75992	1.1716	0.82845	154.17%	0.00550	16.67%
120.00	Alanine, Post-col Ninhydrin Der (%)	16	16	1.9291	0.05827	1.9192	0.04170	0.01303	2.17%	0.02552	3.63%
120.01	Alanine, Pre-col OPA Der (%)	1	1	0.78450							
120.02	Alanine, Post-col OPA Der (%)	2	2	1.9488	0.02298						
120.05	Alanine, Pre-col AQC Der (%)	5	5	1.8451	0.07516	1.8451	0.07516	0.03361	4.07%	0.03860	3.65%
120.99	Alanine, Miscellaneous (%)	2	2	1.9720	0.08768						
121.00	Arginine, Post-col Ninhydrin Der (%)	16	16	1.5509	0.04842	1.5557	0.04055	0.01267	2.61%	0.01576	3.74%
121.01	Arginine, Pre-col OPA Der (%)	1	1	1.2130							
121.02	Arginine, Post-col OPA Der (%)	2	2	1.5755	0.04172						
121.05	Arginine, Pre-col AQC Der (%)	5	5	1.5393	0.08801	1.5393	0.08801	0.03936	5.72%	0.04020	3.75%
121.99	Arginine, Miscellaneous (%)	2	2	1.8193	0.25562						
122.00	Aspartic, Post-col Ninhydrin Der (%)	16	16	2.1544	0.05839	2.1542	0.04874	0.01523	2.26%	0.02453	3.56%
122.01	Aspartic, Pre-col OPA Der (%)	1	1	1.6395							
122.02	Aspartic, Post-col OPA Der (%)	2	2	2.1710	0.00566						
122.05	Aspartic, Pre-col AQC Der (%)	5	5	2.1264	0.05524	2.1264	0.05524	0.02470	2.60%	0.03528	3.57%
122.99	Aspartic, Miscellaneous (%)	2	2	2.1430	0.17395						
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	16	16	0.39165	0.02114	0.39225	0.02064	0.00645	5.26%	0.00933	4.60%
124.01	Cysteine/Cystine, PAO Pre-col OPA Der (%)	1	1	0.24900							
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	2	2	0.43200	0.01838						
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	3	3	0.47583	0.13570	0.47583	0.13570	0.07835	28.52%	0.03233	4.47%
124.99	Cysteine/Cystine, Miscellaneous (%)	2	2	0.38775	0.04632						
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	16	4.8014	0.09796	4.7994	0.09792	0.03060	2.04%	0.06248	3.16%
125.01	Glutamic, Pre-col OPA Der (%)	1	1	3.3595							
125.02	Glutamic, Post-col OPA Der (%)	2	2	4.8928	0.11632						
125.05	Glutamic, Pre-col AQC Der (%)	5	5	4.8247	0.22357	4.8247	0.22357	0.09998	4.63%	0.09300	3.16%
125.99	Glutamic, Miscellaneous (%)	2	2	4.9873	0.16582						
126.00	Glycine, Post-col Ninhydrin Der (%)	16	16	1.8081	0.03926	1.8107	0.03649	0.01140	2.02%	0.01903	3.66%
126.01	Glycine, Pre-col OPA Der (%)	1	1	0.73950							

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126.02	Glycine, Post-col OPA Der (%)	2	2	1.8318	0.03995						
126.05	Glycine, Pre-col AQC Der (%)	5	5	1.8257	0.04679	1.8257	0.04679	0.02093	2.56%	0.04220	3.65%
126.99	Glycine, Miscellaneous (%)	2	2	1.8415	0.10819						
127.00	Histidine, Post-col Ninhydrin Der (%)	16	16	0.61618	0.03204	0.61444	0.03210	0.01003	5.22%	0.00599	4.30%
127.01	Histidine, Pre-col OPA Der (%)	1	1	0.49600							
127.02	Histidine, Post-col OPA Der (%)	2	2	0.54425	0.03429						
127.05	Histidine, Pre-col AQC Der (%)	5	5	0.59680	0.02927	0.59680	0.02927	0.01309	4.90%	0.00960	4.32%
127.99	Histidine, Miscellaneous (%)	2	2	0.64650	0.05869						
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	16	1.0852	0.04208	1.0863	0.04227	0.01321	3.89%	0.01566	3.95%
128.01	Isoleucine, Pre-col OPA Der (%)	1	1	0.75200							
128.02	Isoleucine, Post-col OPA Der (%)	2	2	1.1170	0.05374						
128.05	Isoleucine, Pre-col AQC Der (%)	5	5	1.0475	0.10872	1.0475	0.10872	0.04862	10.38%	0.01660	3.97%
128.99	Isoleucine, Miscellaneous (%)	2	2	1.0663	0.10076						
129.00	Leucine, Post-col Ninhydrin Der (%)	16	16	2.7231	0.06998	2.7156	0.05645	0.01764	2.08%	0.03468	3.44%
129.01	Leucine, Pre-col OPA Der (%)	1	1	1.3790							
129.02	Leucine, Post-col OPA Der (%)	2	2	2.7348	0.07814						
129.05	Leucine, Pre-col AQC Der (%)	5	5	2.6791	0.08964	2.6791	0.08964	0.04009	3.35%	0.04260	3.45%
129.99	Leucine, Miscellaneous (%)	2	2	2.7250	0.16263						
130.00	L-Lysine, Post-col Ninhydrin Der (%)	16	16	1.5445	0.08186	1.5299	0.03105	0.00970	2.03%	0.01591	3.75%
130.01	L-Lysine, Pre-col OPA Der (%)	1	1	0.86750							
130.02	L-Lysine, Post-col OPA Der (%)	2	2	1.5053	0.05692						
130.05	L-Lysine, Pre-col AQC Der (%)	5	5	1.5023	0.08194	1.5023	0.08194	0.03664	5.45%	0.03180	3.76%
130.99	L-Lysine, Miscellaneous (%)	3	3	1.5123	0.09059	1.5123	0.09059	0.05230	5.99%	0.06800	3.76%
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	16	16	0.54257	0.07585	0.55585	0.04436	0.01386	7.98%	0.01563	4.37%
131.01	Methionine, PAO Pre-col OPA Der (%)	1	1	0.25400							
131.02	Methionine, PAO Post-col OPA Der (%)	2	2	0.55525	0.04914						
131.05	Methionine, PAO Pre-col AQC Der (%)	3	3	0.56200	0.02862	0.56200	0.02862	0.01652	5.09%	0.01733	4.36%
131.99	Methionine, Miscellaneous (%)	3	3	0.54883	0.09611	0.54883	0.09611	0.05549	17.51%	0.02367	4.38%
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	16	1.3369	0.04085	1.3339	0.03844	0.01201	2.88%	0.01968	3.83%
132.01	Phenylalanine, Pre-col OPA Der (%)	1	1	0.84250							
132.02	Phenylalanine, Post-col OPA Der (%)	2	2	1.3833	0.12268						
132.05	Phenylalanine, Pre-col AQC Der (%)	5	5	1.3148	0.04147	1.3148	0.04147	0.01855	3.15%	0.05120	3.84%
132.99	Phenylalanine, Miscellaneous (%)	2	2	1.3423	0.00318						
133.00	Proline, Post-col Ninhydrin Der (%)	16	16	1.9716	0.07626	1.9611	0.04806	0.01502	2.45%	0.03784	3.61%
133.05	Proline, Pre-col AQC Der (%)	5	5	1.9337	0.08142	1.9337	0.08142	0.03641	4.21%	0.05460	3.62%
133.99	Proline, Miscellaneous (%)	3	3	2.0697	0.05187	2.0697	0.05187	0.02995	2.51%	0.12000	3.58%
134.00	Serine, Post-col Ninhydrin Der (%)	16	16	1.2472	0.07107	1.2573	0.04126	0.01289	3.28%	0.02833	3.86%
134.01	Serine, Pre-col OPA Der (%)	1	1	0.85300							

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134.02	Serine, Post-col OPA Der (%)	2	2	1.1785	0.05162						
134.05	Serine, Pre-col AQC Der (%)	5	5	1.2561	0.07803	1.2561	0.07803	0.03490	6.21%	0.05060	3.86%
134.99	Serine, Miscellaneous (%)	2	2	1.3833	0.08733						
135.00	Threonine, Post-col Ninhydrin Der (%)	16	16	1.0228	0.03331	1.0213	0.03422	0.01069	3.35%	0.01536	3.99%
135.01	Threonine, Pre-col OPA Der (%)	1	1	0.65100							
135.02	Threonine, Post-col OPA Der (%)	2	2	1.0068	0.00247						
135.05	Threonine, Pre-col AQC Der (%)	5	5	1.0116	0.03347	1.0116	0.03347	0.01497	3.31%	0.02560	3.99%
135.99	Threonine, Miscellaneous (%)	2	2	1.0890	0.00141						
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	5	5	0.26499	0.01540	0.26499	0.01540	0.00770	5.81%	0.01702	4.88%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	3	3	0.26167	0.01446	0.26167	0.01446	0.00835	5.53%	0.00200	4.89%
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	2	2	0.22175	0.05197						
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	5	5	0.26000	0.00745	0.26000	0.00745	0.00333	2.87%	0.00520	4.90%
136.99	Tryptophan, Miscellaneous (%)	2	2	0.30500	0.06364						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	13	0.90957	0.09345	0.92885	0.04277	0.01483	4.60%	0.01699	4.04%
137.01	Tyrosine, Pre-col OPA Der (%)	1	1	0.63100							
137.02	Tyrosine, Post-col OPA Der (%)	2	2	0.91975	0.24006						
137.05	Tyrosine, Pre-col AQC Der (%)	5	5	0.98930	0.06376	0.98930	0.06376	0.02851	6.44%	0.04780	4.01%
137.99	Tyrosine, Miscellaneous (%)	2	2	0.99225	0.08167						
138.00	Valine, Post-col Ninhydrin Der (%)	16	16	1.3103	0.04381	1.3097	0.04470	0.01397	3.41%	0.02298	3.84%
138.01	Valine, Pre-col OPA Der (%)	1	1	0.94800							
138.02	Valine, Post-col OPA Der (%)	2	2	1.3055	0.00636						
138.05	Valine, Pre-col AQC Der (%)	5	5	1.2876	0.08113	1.2876	0.08113	0.03628	6.30%	0.02600	3.85%
138.99	Valine, Miscellaneous (%)	2	2	1.8095	0.90439						
139.00	Taurine, Post-col Ninhydrin Der (%)	4	4	0.14414	0.08184	0.14414	0.08184	0.04092	56.78%	0.01268	5.35%
139.02	Taurine, Post-col OPA Der (%)	1	1	0.08750							
139.03	Taurine, Pre-col Dansyl Cl Der (%)	1	1	0.05000							
139.05	Taurine, Pre-col AQC Der (%)	2	2	0.08475	0.05339						
139.99	Taurine, Miscellaneous (%)	2	2	0.15158	0.13212						
160.99	Fructose, Miscellaneous (%)	3	3	0.18000	0.10210	0.18000	0.10210	0.05895	56.72%	0.01533	5.18%
161.99	Galactose, Miscellaneous (%)	1		0.00000							
162.99	Glucose, Miscellaneous (%)	3	3	0.20567	0.21405	0.20567	0.21405	0.15136	104.07%	0.00333	5.07%
163.99	Lactose, Miscellaneous (%)	2		0.00000							
164.99	Maltose, Miscellaneous (%)	2	2	0.27950	0.04172						
165.99	Sucrose, Miscellaneous (%)	4	4	1.2791	1.2514	1.2791	1.2514	0.72250	97.83%	0.03325	3.85%
400.01	Water activity, Aqualab chilled mirror (Units)	6	6	0.29964	0.03679	0.29896	0.04013	0.02048	13.42%	0.00348	
400.99	Water activity, Miscellaneous (Units)	3	3	0.33800	0.02551	0.33800	0.02551	0.01473	7.55%	0.00733	
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	2	2	0.17575	0.09086						
516.43	Arsenic, total, ICP, Microwave (mg / kg (ppm))	1		0.00000							

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
516.52	Arsenic, total, ICP-MS, Open vessel (mg / kg (ppm)	1	1	0.28500							
516.53	Arsenic, total, ICP-MS, Microwave (mg / kg (ppm)	4	4	0.34191	0.08185	0.34191	0.08185	0.04093	23.94%	0.00988	18.80%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	1	1	0.05500							
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	1	1	0.01585							
518.52	Cadmium, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.04000							
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.04026	0.00357	0.04026	0.00357	0.00179	8.87%	0.00353	22.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	1	1	4.0500							
520.42	Chromium, ICP, Open vessel (mg / kg (ppm))	3	3	4.4217	0.45140	4.4217	0.45140	0.26062	10.21%	0.25667	12.79%
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	1	1	5.0550							
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	2	2	3.9207	0.97489						
526.31	Lead, AAS, Dry ash (mg / kg (ppm))	1	1	0.20000							
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	1	1	0.06500							
526.52	Lead, ICP-MS, Open vessel (mg / kg (ppm))	1	1	0.12000							
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.11125	0.00762	0.11125	0.00762	0.00381	6.85%	0.00435	22.00%
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	1	1	1.2000							
539.42	Nickel, ICP, Open vessel (mg / kg (ppm))	1	1	1.1000							
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	1	1	1.7075							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	2	2	1.1149	0.19820						
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	2	2	0.00785	0.00304						
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.23720							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	2.2418							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	2	2	0.51995	0.01973						
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.72220							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	2.9332							
726.02	Linoleic Acid (9c,12c-18:2), Direct Methylation by ,	1	1	2.3850							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/	4	4	1.6208	0.99083	1.6208	0.99083	0.57206	61.13%	0.01230	
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellane	2	2	0.15638	0.00194						
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellane	1	1	0.08700							
740.02	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5)	1	1	0.15500							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5)	5	5	0.25829	0.03342	0.25829	0.03342	0.01495	12.94%	0.00626	
746.99	Docosapentaenoic Acid n-3 DPA (DHA)7c,10c,13c,16c,19c-22:5	2	2	0.09475	0.07814						
750.02	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c,22:6)	1	1	0.10500							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c,22:6)	3	3	0.19655	0.01590	0.19655	0.01590	0.01124	8.09%	0.00003	
754.02	Total n-3 Polyunsaturated (Omega-3) Fatty Acids,	2	2	0.53500	0.23335						
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids,	6	6	1.5704	2.1954	0.71257	0.12678	0.06470	17.79%	0.05505	
756.02	Total n-6 Polyunsaturated (Omega-6) Fatty Acids,	2	2	2.3425	0.06010						
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids,	6	6	4.9122	6.5882	2.3830	0.52780	0.26934	22.15%	0.02312	
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	9.5098							

Test Material Code # 201721

Issue Date : 02/28/2017

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



AAFCO
Proficiency Testing Program



Animal Feed Scheme
Dry Dog Food
Test Material Code # 201721

Method Precision Report

Methods Reported: 87
Labs Reporting: 187
Issue Date : 02/28/2017

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 (%)	38	35	6.1645	0.62197	0.26037	0.09589	0.27747	4.20%	1.546%	4.47%	2.8937
001.99	Loss on Drying, Miscellaneous (%)	19	17	6.0057	0.59116	0.27289	0.08454	0.28568	4.42%	1.369%	4.63%	3.3791
002.01	Protein, Auto Kjel-Foss (%)	12	11	28.352	0.53308	0.31360	0.13296	0.34062	1.10%	0.467%	1.20%	2.5619
002.05	Protein, Copper, Boric Acid (%)	24	22	28.592	0.58775	0.29728	0.07479	0.30655	1.04%	0.262%	1.08%	4.0989
002.06	Protein, Combustion Nitrogen Analyzer (%)	124	118	28.516	2.5286	0.34159	0.20678	0.39930	1.18%	0.717%	1.38%	1.9311
003.00	Fat, Eth Ext., Direct (%)	11	10	9.1128	1.2751	0.88027	0.10741	0.88680	9.98%	1.217%	10.05%	8.2559
003.06	Fat, Pet Ether (%)	15	13	8.6099	1.5197	0.90433	0.07943	0.90781	10.09%	0.886%	10.13%	11.430
003.09	Fat, Soxtec, Eth Ext (%)	13	12	8.6131	0.29441	0.28417	0.10936	0.30449	3.31%	1.273%	3.54%	2.7843
003.10	Fat, Soxtec, Pet Ether (%)	29	27	8.5287	0.26796	0.21282	0.09570	0.23335	2.50%	1.123%	2.74%	2.4384
003.14	Fat, Ankom (%)	31	29	8.6821	0.79806	0.17239	0.16019	0.23533	2.03%	1.888%	2.77%	1.4690
004.00	Fiber, Crude, Asbestos Free (%)	15	15	3.6033	0.35713	0.35426	0.06398	0.35999	9.83%	1.776%	9.99%	5.6267
004.06	Fiber, Fibertec (%)	22	20	3.7953	0.45943	0.25508	0.07927	0.26711	6.87%	2.135%	7.19%	3.3695
004.07	Fiber, ANKOM (%)	55	52	4.0491	0.70866	0.61133	0.10791	0.62078	15.38%	2.715%	15.62%	5.7529
005.00	Ash, 2h @ 600°C (%)	87	84	6.0189	0.23884	0.11966	0.05036	0.12983	2.00%	0.841%	2.17%	2.5781
005.05	Ash, 3h @ 550°C (%)	20	19	5.9729	0.10446	0.07745	0.04481	0.08948	1.29%	0.748%	1.49%	1.9969
005.99	Ash, Miscellaneous (%)	12	12	5.9802	0.08544	0.08033	0.04117	0.09026	1.34%	0.688%	1.51%	2.1925
008.02	Fiber, Acid Detergent (%)	15	14	5.1154	0.46455	0.43082	0.22693	0.48693	8.36%	4.405%	9.45%	2.1457
008.08	Fiber, Acid Detergent, ANKOM (%)	39	38	5.5432	1.0828	1.0045	0.23577	1.0318	18.33%	4.304%	18.83%	4.3761
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	9	8	8.8617	3.6207	1.6852	0.23999	1.7022	16.94%	2.413%	17.11%	7.0929
009.09	Fiber, Neutral Detergent, ANKOM (%)	31	28	10.843	2.2453	1.7268	0.32642	1.7574	16.42%	3.105%	16.71%	5.3837
010.99	Moisture, Miscellaneous (%)	14	13	6.2552	0.30387	0.22270	0.09520	0.24220	3.53%	1.509%	3.84%	2.5440
011.01	Loss on Drying, 135°C 2hr (%)	67	63	6.4915	0.41432	0.22791	0.08348	0.24272	3.47%	1.272%	3.70%	2.9075
012.01	Starch, Megazyme (%)	9	8	33.204	2.8510	1.2922	1.0955	1.6940	3.80%	3.219%	4.98%	1.5464
013.00	Fat, Acid hydrolysis (%)	18	17	11.880	2.1030	1.0308	0.25397	1.0616	8.37%	2.062%	8.62%	4.1799
013.02	Fat, Mojonier, Bak Ext (%)	34	31	12.434	0.82134	0.35464	0.25231	0.43523	2.90%	2.062%	3.56%	1.7250
013.10	Fat, Soxtec-Acid Hydrolysis (%)	11	10	11.168	0.61801	0.37993	0.24802	0.45372	3.36%	2.193%	4.01%	1.8294
019.00	Calcium, Ox-Mn04 Vol. (%)	11	11	1.1287	0.09553	0.09388	0.02499	0.09715	8.32%	2.214%	8.61%	3.8869
019.08	Calcium, EDTA (%)	9	8	1.1153	0.16632	0.03404	0.01291	0.03640	3.21%	1.216%	3.43%	2.8207
019.31	Calcium, AAS, Dry ash (%)	23	21	1.0994	0.07188	0.05121	0.03144	0.06009	4.67%	2.867%	5.48%	1.9112
019.41	Calcium, ICP, Dry ash (%)	26	24	1.0814	0.09034	0.05366	0.01525	0.05578	4.91%	1.394%	5.10%	3.6590
019.42	Calcium, ICP, Open vessel (%)	21	19	1.1089	0.10046	0.07454	0.04031	0.08474	6.61%	3.576%	7.52%	2.1023
019.43	Calcium, ICP, Microwave (%)	22	21	484.05	2,265.1	0.06488	0.02276	0.06876	5.82%	2.041%	6.16%	3.0204

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
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	10	9	17.705	4.3859	1.7101	0.81638	1.8950	9.01%	4.301%	9.98%	2.3212
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	19	18	61.624	183.78	1.1986	2.5288	2.7984	6.16%	12.992%	14.38%	1.1066
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	19	18	18.578	1.1531	1.0532	0.67320	1.2500	5.65%	3.612%	6.71%	1.8568
022.43	Copper, ICP, Microwave (mg / kg (ppm))	18	16	18.786	2.0899	0.93690	0.85742	1.2700	5.16%	4.720%	6.99%	1.4812
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	13	12	385.08	356.09	37.084	5.1694	37.443	12.93%	1.802%	13.05%	7.2431
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	20	18	985.08	3,033.7	14.260	7.9442	16.324	4.93%	2.748%	5.65%	2.0548
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	16	14	262.60	56.157	38.761	8.2729	39.634	14.22%	3.034%	14.54%	4.7909
025.43	Iron, ICP, Microwave (mg / kg (ppm))	18	16	281.05	31.008	16.959	4.3701	17.513	5.96%	1.536%	6.16%	4.0075
027.31	Magnesium, AAS, Dry ash (%)	14	13	0.12707	0.00916	0.00493	0.00353	0.00607	3.94%	2.825%	4.85%	1.7165
027.41	Magnesium, ICP, Dry ash (%)	21	20	0.13626	0.04822	0.00565	0.00402	0.00693	4.49%	3.192%	5.51%	1.7259
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.13085	0.00866	0.00854	0.00363	0.00928	6.54%	2.781%	7.10%	2.5547
027.43	Magnesium, ICP, Microwave (%)	18	17	63.802	270.12	0.03088	0.00497	0.03128	23.03%	3.711%	23.33%	6.2872
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	10	9	78.215	7.9491	5.8744	1.7121	6.1188	7.34%	2.141%	7.65%	3.5739
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	19	17	83.083	4.0777	3.4999	1.2079	3.7025	4.24%	1.463%	4.48%	3.0651
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	19	18	120.28	159.44	5.8137	3.4948	6.7833	6.94%	4.174%	8.10%	1.9409
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	19	18	85.685	11.482	3.7038	1.5280	4.0066	4.45%	1.837%	4.82%	2.6221
031.01	Phosphorus, Photometric (%)	40	38	0.94407	0.05255	0.03256	0.01548	0.03605	3.46%	1.647%	3.84%	2.3283
031.41	Phosphorus, ICP, Dry ash (%)	24	22	0.96044	0.06228	0.05256	0.01481	0.05461	5.43%	1.530%	5.64%	3.6865
031.42	Phosphorus, ICP, Open vessel (%)	22	20	0.93331	0.06471	0.05501	0.02391	0.05998	5.85%	2.545%	6.38%	2.5083
031.43	Phosphorus, ICP, Microwave (%)	22	21	314.34	1,469.8	0.10480	0.01709	0.10618	10.88%	1.775%	11.03%	6.2119
032.31	Potassium, AAS, Dry ash (%)	15	14	0.64372	0.06183	0.03917	0.01384	0.04155	5.97%	2.110%	6.33%	3.0010
032.41	Potassium, ICP, Dry ash (%)	23	22	0.87312	1.0311	0.03285	0.03071	0.04497	4.99%	4.666%	6.83%	1.4643
032.42	Potassium, ICP, Open vessel (%)	19	17	0.66108	0.06430	0.02220	0.01976	0.02972	3.31%	2.948%	4.43%	1.5040
032.43	Potassium, ICP, Microwave (%)	18	17	352.28	1,491.7	0.11923	0.01306	0.11994	17.38%	1.904%	17.48%	9.1803
033.00	Salt as chloride, Sol Cl (%)	16	15	1.1099	0.21283	0.21537	0.01181	0.21570	19.60%	1.075%	19.63%	18.257
033.01	Salt as chloride, Poten Cl (%)	21	20	1.2286	0.18098	0.02912	0.00938	0.03060	2.30%	0.740%	2.41%	3.2607
035.31	Sodium, AAS, Dry ash (%)	13	12	0.43001	0.05235	0.03908	0.00811	0.03991	9.31%	1.932%	9.50%	4.9204
035.41	Sodium, ICP, Dry ash (%)	26	23	0.41699	0.02898	0.02738	0.00574	0.02798	6.62%	1.388%	6.76%	4.8730
035.42	Sodium, ICP, Open vessel (%)	17	17	0.41591	0.02914	0.02630	0.01775	0.03173	6.32%	4.268%	7.63%	1.7874
035.43	Sodium, ICP, Microwave (%)	17	16	216.19	889.69	0.02984	0.01058	0.03166	7.38%	2.616%	7.83%	2.9921
036.42	Sulfur, ICP, Open vessel (%)	17	16	1.4123	4.3745	0.02345	0.01389	0.02726	6.68%	3.953%	7.76%	1.9626
036.43	Sulfur, ICP, Microwave (%)	13	12	258.57	931.00	0.03934	0.01299	0.04143	11.02%	3.639%	11.61%	3.1901
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	10	9	460.66	399.67	164.61	3.4750	164.64	47.82%	1.010%	47.84%	47.380
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	19	18	464.35	772.14	11.538	7.0663	13.530	4.02%	2.460%	4.71%	1.9147
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	16	14	275.28	33.502	19.830	13.428	23.948	7.18%	4.863%	8.67%	1.7834
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	20	19	289.12	21.253	16.752	4.5290	17.354	5.85%	1.583%	6.06%	3.8317
106.02	Vitamin A, LC (KU / kg)	21	20	20.376	7.3141	4.9442	1.4303	5.1469	25.76%	7.452%	26.81%	3.5986
109.02	Vitamin E, LC (IU/kg)	15	15	593.51	83.816	83.330	12.746	84.299	14.04%	2.148%	14.20%	6.6137
120.00	Alanine, Post-col Ninhydrin Der (%)	16	15	1.9291	0.05827	0.04768	0.01625	0.05037	2.48%	0.846%	2.62%	3.1004
121.00	Arginine, Post-col Ninhydrin Der (%)	16	15	1.5509	0.04842	0.03339	0.01598	0.03701	2.14%	1.024%	2.37%	2.3166

Test Material Code # 201721

Issue Date : 02/28/2017

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 (%)	16	16	2.1544	0.05839	0.05618	0.02250	0.06052	2.61%	1.045%	2.81%	2.6892
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	16	15	0.39165	0.02114	0.01716	0.00612	0.01822	4.35%	1.551%	4.61%	2.9745
125.00	Glutamic, Post-col Ninhydrin Der (%)	16	16	4.8014	0.09796	0.08750	0.06230	0.10741	1.82%	1.298%	2.24%	1.7240
126.00	Glycine, Post-col Ninhydrin Der (%)	16	15	1.8081	0.03926	0.02727	0.01865	0.03304	1.50%	1.028%	1.82%	1.7718
127.00	Histidine, Post-col Ninhydrin Der (%)	16	16	0.61618	0.03204	0.03176	0.00606	0.03233	5.15%	0.984%	5.25%	5.3312
128.00	Isoleucine, Post-col Ninhydrin Der (%)	16	16	1.0852	0.04208	0.04114	0.01252	0.04300	3.79%	1.153%	3.96%	3.4358
129.00	Leucine, Post-col Ninhydrin Der (%)	16	15	2.7231	0.06998	0.05992	0.02614	0.06538	2.21%	0.963%	2.41%	2.5009
130.00	L-Lysine, Post-col Ninhydrin Der (%)	16	14	1.5445	0.08186	0.02731	0.01251	0.03004	1.80%	0.823%	1.98%	2.4003
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	16	14	0.54257	0.07585	0.05120	0.01201	0.05259	9.16%	2.149%	9.41%	4.3782
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	16	15	1.3369	0.04085	0.02934	0.01530	0.03309	2.21%	1.151%	2.49%	2.1622
133.00	Proline, Post-col Ninhydrin Der (%)	16	15	1.9716	0.07626	0.03183	0.03644	0.04839	1.63%	1.864%	2.47%	1.3277
134.00	Serine, Post-col Ninhydrin Der (%)	16	14	1.2472	0.07107	0.02802	0.01748	0.03302	2.23%	1.390%	2.63%	1.8892
135.00	Threonine, Post-col Ninhydrin Der (%)	16	16	1.0228	0.03331	0.03198	0.01315	0.03458	3.13%	1.286%	3.38%	2.6289
137.00	Tyrosine, Post-col Ninhydrin Der (%)	13	12	0.90957	0.09345	0.04773	0.01898	0.05137	5.12%	2.036%	5.51%	2.7070
138.00	Valine, Post-col Ninhydrin Der (%)	16	15	1.3103	0.04381	0.04267	0.01441	0.04504	3.25%	1.098%	3.43%	3.1250

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