



AAFCO
Proficiency Testing Program



Pet Food Scheme

Barley

Test Material Code # 201744

Method Summary Report

(Precision Report Follows)

Methods Reported: 273

Labs Reporting: 56

Issue Date : 01/31/2018

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value - Robust Mean	AAFCO PT ftp - Robust sd	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Horwitz %RSD
001.00	Loss on Drying, Vac 95°C 5 hr (%)	3	3	11.032	0.10400	11.032	0.10400	0.07506	0.94%	0.02167	2.79%
001.03	Loss on Drying, Low temp. methods (%)	1	1	11.185							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	11	11	10.891	0.61643	11.009	0.41543	0.15657	3.77%	0.19905	2.79%
001.08	Loss on Drying, 102°C 16 hr, in meat (%)	1	1	11.135							
001.99	Loss on Drying, Miscellaneous (%)	5	5	10.272	0.85576	10.272	0.85576	0.47838	8.33%	0.17700	2.82%
002.01	Protein, Auto Kjel-Foss (%)	3	3	11.831	0.19600	11.831	0.19600	0.14145	1.66%	0.09667	2.76%
002.02	Protein, Semiauto Autoanalyzer (%)	1	1	11.740							
002.04	Protein, Copper Catalyst (%)	2	2	12.025	0.23335						
002.05	Protein, Copper, Boric Acid (%)	4	3	11.743	0.05530	11.743	0.05530	0.03991	0.47%	0.07333	2.76%
002.06	Protein, Combustion Nitrogen Analyzer (%)	46	45	11.845	0.27401	11.871	0.21859	0.04073	1.84%	0.10895	2.76%
002.08	Protein, Cu/Ti (%)	1	1	12.075							
002.11	Protein, NIR (%)	1	1	11.310							
002.99	Protein, Miscellaneous (%)	3	3	11.883	0.25658	11.883	0.25658	0.22679	2.16%	0.03333	2.76%
003.00	Fat, Eth Ext., Direct (%)	3	3	2.0369	0.74479	2.0369	0.74479	0.53751	36.56%	0.02093	3.59%
003.01	Fat, Ind Eth Ext (13th ed.), Indirect (%)	2	2	1.4200	0.22627						
003.06	Fat, Pet Ether (%)	2	2	1.7025	0.15910						
003.09	Fat, Soxtec, Eth Ext (%)	3	3	1.6507	0.05587	1.6507	0.05587	0.04032	3.38%	0.03067	3.71%
003.10	Fat, Soxtec, Pet Ether (%)	9	9	1.5182	0.11557	1.5252	0.11440	0.04767	7.50%	0.07784	3.75%
003.11	Fat, NIR (%)	1	1	1.5100							
003.12	Fat, Hexane Ext (%)	1	1	1.7300							
003.13	Fat, Soxtec, Hexane Ext. (%)	2	2	1.5425	0.28638						
003.14	Fat, Ankom (%)	10	10	1.5623	0.36799	1.5289	0.33433	0.13216	21.87%	0.07934	3.75%
003.99	Fat, Miscellaneous (%)	1	1	1.7000							
004.00	Fiber, Crude, Asbestos Free (%)	10	10	1.1170	0.21901	1.0769	0.08574	0.03389	7.96%	0.05009	3.96%
004.03	Fiber, Fritted Glass (%)	3	3	1.0917	0.10516	1.0917	0.10516	0.09295	9.63%	0.02333	3.95%
004.06	Fiber, Fibertec (%)	4	4	1.3436	0.19438	1.3436	0.19438	0.12149	14.47%	0.09625	3.83%
004.07	Fiber, ANKOM (%)	17	17	1.2536	0.50428	1.1499	0.19373	0.05873	16.85%	0.17072	3.92%
004.11	Fiber, NIR (%)	1	1	2.8550							
004.99	Fiber, Miscellaneous (%)	1	1	0.95000							
005.00	Ash, 2h @ 600°C (%)	30	29	1.3778	0.05993	1.3800	0.05089	0.01181	3.69%	0.05556	3.81%

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005.05	Ash, 3h @ 550°C (%)	7	7	1.3546	0.02933	1.3546	0.03325	0.01571	2.45%	0.04404	3.82%
005.11	Ash, NIR (%)	1	1	2.0950							
005.99	Ash, Miscellaneous (%)	9	9	1.4296	0.10575	1.4238	0.10709	0.04462	7.52%	0.02616	3.79%
006.01	Total sugars, Mod. Fehling Soln (%)	1	1	2.9600							
006.99	Total sugars, Miscellaneous (%)	4	3	0.98333	0.20207	0.98333	0.20207	0.17861	20.55%	0.02667	4.01%
008.02	Fiber, Acid Detergent (%)	3	3	1.2328	0.09139	1.2328	0.09139	0.06596	7.41%	0.06273	3.88%
008.08	Fiber, Acid Detergent, ANKOM (%)	8	7	1.6620	0.43118	1.6495	0.46033	0.21748	27.91%	0.08893	3.71%
008.99	Fiber, Acid Detergent Miscellaneous (%)	1	1	1.8300							
009.07	Fiber, Neutral Det-ENZ Pretreat (%)	3	3	7.3821	2.0379	7.3821	2.0379	1.4707	27.61%	0.23320	2.96%
009.09	Fiber, Neutral Detergent, ANKOM (%)	7	6	7.1039	2.8997	6.3827	1.4268	0.72813	22.35%	0.29550	3.03%
009.99	Fiber, Neutral Det Miscellaneous (%)	1	1	16.415							
010.03	Moisture, Karl-Fischer (%)	1	1	11.305							
010.99	Moisture, Miscellaneous (%)	6	6	11.123	0.39960	11.123	0.45314	0.23124	4.07%	0.19912	2.78%
011.01	Loss on Drying, 135°C 2hr (%)	23	22	11.230	0.33910	11.268	0.26629	0.07097	2.36%	0.14483	2.78%
011.02	Loss on Drying, 130°C for 2 hours (%)	5	4	11.298	0.46218	11.298	0.46218	0.33355	4.09%	0.03500	2.78%
012.00	Starch, Polarimetric (Ewers) (%)	2	2	60.125	0.67175						
012.01	Starch, Megazyme (%)	6	6	56.890	4.7718	56.890	5.4112	2.7614	9.51%	0.78797	1.33%
012.03	Starch, Enzymatic (%)	2	2	57.563	1.2198						
012.04	Starch, YSI Analyzer (%)	1	1	54.600							
012.11	Starch, NIR (%)	1	1	51.445							
013.00	Fat, Acid hydrolysis (%)	11	11	2.4848	0.50909	2.4853	0.57529	0.21682	23.15%	0.10792	3.49%
013.02	Fat, Mojonnier, Bak Ext (%)	12	12	2.7390	0.60062	2.6628	0.30114	0.10867	11.31%	0.15702	3.45%
013.10	Fat, Soxtec-Acid Hydrolysis (%)	4	3	2.1950	0.06557	2.1950	0.06557	0.04732	2.99%	0.03667	3.55%
013.13	Fat, Ankom- Acid Hydrolysis (%)	2	2	3.0295	0.05020						
014.99	Fiber, total dietary TDF, Miscellaneous (%)	1	1	10.750							
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	1	1	10.130							
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	1	1	6.9000							
019.00	Calcium, Ox-Mn04 Vol. (%)	1	1	0.47100							
019.31	Calcium, AAS, Dry ash (%)	2	2	0.03250	0.00354						
019.41	Calcium, ICP, Dry ash (%)	9	9	0.03354	0.00308	0.03339	0.00313	0.00131	9.38%	0.00169	6.67%
019.42	Calcium, ICP, Open vessel (%)	3	3	0.05122	0.02282	0.05122	0.02282	0.01647	44.55%	0.01970	6.26%
019.43	Calcium, ICP, Microwave (%)	10	10	0.03668	0.01076	0.03650	0.01180	0.00467	32.34%	0.00050	6.58%
019.44	Calcium, ICP, Dry ash (%)	4	3	0.03113	0.00099	0.03113	0.00099	0.00071	3.18%	0.00013	6.74%
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	0.03500							
019.53	Calcium, ICP-MS, Microwave (%)	1	1	0.03295							
019.99	Calcium, Miscellaneous (%)	2	2	0.03600	0.00849						
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	1	1	0.00600							
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	1		0.00000							

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022.31	Copper, AAS, Dry ash (mg / kg (ppm))	1	1	9.6000							
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	9	9	5.2819	0.82070	5.2819	0.93068	0.38778	17.62%	0.27251	12.45%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	3	3	6.9322	3.9426	6.9322	3.9426	3.4848	56.87%	1.3937	11.95%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	8	7	4.9276	0.45186	4.9860	0.35167	0.16615	7.05%	0.22286	12.56%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	4	4	4.8813	0.15499	4.8813	0.15499	0.09687	3.18%	0.05250	12.60%
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	1	1	6.0450							
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	1	1	4.9850							
022.99	Copper, Miscellaneous (mg / kg (ppm))	1	1	4.5000							
024.99	Iodine, Miscellaneous (mg / kg (ppm))	1		0.00000							
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	1	1	43.050							
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	13	13	36.667	5.4577	36.458	3.3907	1.1755	9.30%	0.96439	9.31%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	3	3	48.793	15.336	48.793	15.336	11.068	31.43%	18.000	8.91%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	8	7	34.594	4.1987	35.402	2.6672	1.2601	7.53%	1.4229	9.35%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	37.870							
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	1	1	36.150							
025.99	Iron, Miscellaneous (mg / kg (ppm))	1	1	38.000							
027.31	Magnesium, AAS, Dry ash (%)	2	2	0.09405	0.00219						
027.41	Magnesium, ICP, Dry ash (%)	10	10	0.09603	0.00258	0.09603	0.00293	0.00116	3.05%	0.00392	5.69%
027.42	Magnesium, ICP, Open vessel (%)	3	3	0.09853	0.00354	0.09853	0.00354	0.00255	3.59%	0.00147	5.67%
027.43	Magnesium, ICP, Microwave (%)	9	8	0.09144	0.00933	0.09215	0.00888	0.00393	9.64%	0.00115	5.73%
027.44	Magnesium, ICP, Dry ash (%)	5	5	0.09319	0.00444	0.09319	0.00444	0.00248	4.76%	0.00038	5.72%
027.52	Magnesium, ICP-MS, Open vessel (%)	1	1	0.11000							
027.53	Magnesium, ICP-MS, Microwave (%)	1	1	0.09780							
027.99	Magnesium, Miscellaneous (%)	1	1	0.09000							
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	1	1	14.050							
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	10	10	11.973	1.3752	11.904	0.82096	0.32451	6.90%	0.67863	11.02%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	3	3	13.260	1.1842	13.260	1.1842	0.85462	8.93%	0.99333	10.84%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	10	10	11.935	1.4311	12.088	1.2335	0.48756	10.20%	0.40940	10.99%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	4	4	11.415	0.74290	11.415	0.74290	0.46431	6.51%	0.16500	11.09%
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	1	1	12.460							
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	1	1	12.150							
028.99	Manganese, Miscellaneous (mg / kg (ppm))	1	1	11.000							
031.01	Phosphorus, Photometric (%)	5	5	0.28570	0.01307	0.28570	0.01307	0.00731	4.57%	0.00660	4.83%
031.41	Phosphorus, ICP, Dry ash (%)	9	9	0.28361	0.02007	0.28361	0.02276	0.00948	8.02%	0.00987	4.83%
031.42	Phosphorus, ICP, Open vessel (%)	3	3	0.29235	0.02902	0.29235	0.02902	0.02094	9.93%	0.03403	4.81%
031.43	Phosphorus, ICP, Microwave (%)	10	10	0.25056	0.08504	0.27035	0.04009	0.01585	14.83%	0.00961	4.87%
031.44	Phosphorus, ICP, Dry ash (%)	4	4	0.27238	0.01092	0.27238	0.01092	0.00683	4.01%	0.00475	4.86%
031.53	Phosphorus, ICP-MS, Microwave (%)	1	1	0.27700							

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031.99	Phosphorus, Miscellaneous (%)	2	2	0.27750	0.00354						
032.31	Potassium, AAS, Dry ash (%)	2	2	0.41100	0.04808						
032.41	Potassium, ICP, Dry ash (%)	10	10	0.35074	0.01961	0.35305	0.01533	0.00606	4.34%	0.00625	4.68%
032.42	Potassium, ICP, Open vessel (%)	3	3	0.36318	0.02393	0.36318	0.02393	0.01727	6.59%	0.00643	4.66%
032.43	Potassium, ICP, Microwave (%)	11	11	0.34639	0.02964	0.34809	0.02958	0.01115	8.50%	0.01054	4.69%
032.44	Potassium, ICP, Dry ash (%)	5	4	0.34166	0.00578	0.34166	0.00578	0.00361	1.69%	0.00233	4.70%
032.53	Potassium, ICP-MS, Microwave (%)	1	1	0.33100							
032.99	Potassium, Miscellaneous (%)	1	1	0.38000							
033.00	Salt as chloride, Sol Cl (%)	1	1	0.12785							
033.01	Salt as chloride, Poten Cl (%)	7	6	0.13758	0.00388	0.13841	0.00228	0.00117	1.65%	0.00383	5.39%
033.05	Salt as chloride, Ion Sel Electrode (%)	1	1	0.14000							
034.04	Selenium, AA, Hydride (mg / kg (ppm))	1	1	0.01050							
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	1		0.00000							
035.31	Sodium, AAS, Dry ash (%)	2	2	0.00778	0.00180						
035.41	Sodium, ICP, Dry ash (%)	12	11	0.00823	0.00302	0.00791	0.00259	0.00097	32.71%	0.00092	8.29%
035.42	Sodium, ICP, Open vessel (%)	2	1	0.00680							
035.43	Sodium, ICP, Microwave (%)	9	8	0.00738	0.00257	0.00738	0.00291	0.00129	39.45%	0.00013	8.37%
035.53	Sodium, ICP-MS, Microwave (%)	1	1	0.00505							
035.99	Sodium, Miscellaneous (%)	1	1	0.01000							
036.42	Sulfur, ICP, Open vessel (%)	4	4	0.12629	0.00348	0.12629	0.00348	0.00218	2.76%	0.00113	5.46%
036.43	Sulfur, ICP, Microwave (%)	6	6	0.12569	0.01185	0.12569	0.01344	0.00686	10.69%	0.00685	5.46%
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.12950							
036.99	Sulfur, Miscellaneous (%)	2	2	0.11825	0.00247						
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	1	1	23.800							
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	10	9	21.914	2.4969	22.040	2.3133	0.96388	10.50%	1.0200	10.04%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	3	3	27.132	6.6880	27.132	6.6880	5.9114	24.65%	10.877	9.73%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	9	9	21.984	2.5685	22.197	2.0542	0.85592	9.25%	0.65522	10.03%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	3	3	21.147	0.54501	21.147	0.54501	0.39333	2.58%	0.30200	10.11%
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	1	1	14.285							
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	1	1	24.400							
037.99	Zinc, Miscellaneous (mg / kg (ppm))	1	1	19.000							
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	1	1	0.04700							
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	2	1	0.20000							
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	1	1	0.04440							
042.00	Chloride, Titrimetric (%)	1	1	0.09000							
042.99	Chloride, Miscellaneous (%)	1	1	0.08450							
101.01	Choline Chloride, Chem (mg / kg (ppm))	2	2	1,370.0	14.142						
102.01	Niacin, Microbiological (mg / kg (ppm))	2	2	61.800	4.4548						

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103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	1.3700							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	9.6500							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	1	1	1.0450							
104.02	Riboflavin, Microbiological, Turbidity (mg / kg (ppm))	1	1	2.0500							
105.00	Thiamine, LC (mg / kg (ppm))	3	3	2.5102	0.60576	2.5102	0.60576	0.43717	24.13%	0.12967	13.93%
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	3.9150							
105.99	Thiamine, Miscellaneous (mg / kg (ppm))	1	1	2.6500							
106.02	Vitamin A, LC (KU / kg)	1		0.00000							
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1		0.00000							
108.99	Vitamin D3, Miscellaneous (KU / kg)	2		0.00000							
109.02	Vitamin E, LC (IU/kg)	1		0.00000							
112.00	Pyridoxine, Vitamin B6 (µg / g)	1	1	1.8500							
112.01	Pyridoxine, LC (µg / g)	1	1	2.5950							
113.01	Folic Acid, Micro (mg / kg (ppm))	2	2	0.26500	0.04243						
114.01	Biotin, Microbiological (mg / kg (ppm))	2	2	0.12600	0.00566						
120.00	Alanine, Post-col Ninhydrin Der (%)	4	4	0.46966	0.01713	0.46966	0.01713	0.01071	3.65%	0.00908	4.48%
120.01	Alanine, Pre-col OPA Der (%)	1	1	0.46200							
120.02	Alanine, Post-col OPA Der (%)	1	1	0.44500							
120.05	Alanine, Pre-col AQC Der (%)	1	1	0.45500							
120.99	Alanine, Miscellaneous (%)	1	1	0.45300							
121.00	Arginine, Post-col Ninhydrin Der (%)	4	4	0.53778	0.01204	0.53778	0.01204	0.00753	2.24%	0.01290	4.39%
121.01	Arginine, Pre-col OPA Der (%)	1	1	0.54300							
121.02	Arginine, Post-col OPA Der (%)	1	1	0.55500							
121.05	Arginine, Pre-col AQC Der (%)	1	1	0.58000							
121.99	Arginine, Miscellaneous (%)	1	1	0.48900							
122.00	Aspartic, Post-col Ninhydrin Der (%)	4	4	0.66451	0.03255	0.66451	0.03255	0.02034	4.90%	0.01498	4.25%
122.01	Aspartic, Pre-col OPA Der (%)	1	1	0.63300							
122.02	Aspartic, Post-col OPA Der (%)	1	1	0.63500							
122.05	Aspartic, Pre-col AQC Der (%)	1	1	0.68000							
122.99	Aspartic, Miscellaneous (%)	1	1	0.64550							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	4	4	0.23775	0.02233	0.23775	0.02233	0.01396	9.39%	0.00550	4.97%
124.01	Cysteine/Cystine, PAO Pre-col OPA Der (%)	1	1	0.25600							
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.24000							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.23600							
125.00	Glutamic, Post-col Ninhydrin Der (%)	4	3	3.0611	0.01857	3.0611	0.01857	0.01340	0.61%	0.06530	3.38%
125.01	Glutamic, Pre-col OPA Der (%)	1	1	2.9150							
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.2700							
125.05	Glutamic, Pre-col AQC Der (%)	1	1	3.1100							

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125.99	Glutamic, Miscellaneous (%)	1	1	3.1210							
126.00	Glycine, Post-col Ninhydrin Der (%)	4	4	0.43003	0.02035	0.43003	0.02035	0.01272	4.73%	0.01340	4.54%
126.01	Glycine, Pre-col OPA Der (%)	1	1	0.42100							
126.05	Glycine, Pre-col AQC Der (%)	1	1	0.46000							
126.99	Glycine, Miscellaneous (%)	1	1	0.43000							
127.00	Histidine, Post-col Ninhydrin Der (%)	4	4	0.24765	0.01092	0.24765	0.01092	0.00683	4.41%	0.00470	4.93%
127.01	Histidine, Pre-col OPA Der (%)	1	1	0.22700							
127.02	Histidine, Post-col OPA Der (%)	1	1	0.27000							
127.05	Histidine, Pre-col AQC Der (%)	1	1	0.27000							
127.99	Histidine, Miscellaneous (%)	1	1	0.24550							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	4	4	0.44040	0.01715	0.44040	0.01715	0.01072	3.89%	0.01535	4.53%
128.01	Isoleucine, Pre-col OPA Der (%)	1	1	0.41900							
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.42000							
128.05	Isoleucine, Pre-col AQC Der (%)	1	1	0.41000							
128.99	Isoleucine, Miscellaneous (%)	1	1	0.41550							
129.00	Leucine, Post-col Ninhydrin Der (%)	4	4	0.79050	0.04175	0.79050	0.04175	0.02609	5.28%	0.01140	4.14%
129.01	Leucine, Pre-col OPA Der (%)	1	1	0.79400							
129.02	Leucine, Post-col OPA Der (%)	1	1	0.80500							
129.05	Leucine, Pre-col AQC Der (%)	1	1	0.79500							
129.99	Leucine, Miscellaneous (%)	1	1	0.79000							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	4	4	0.37085	0.05311	0.37085	0.05311	0.03319	14.32%	0.01125	4.64%
130.01	L-Lysine, Pre-col OPA Der (%)	1	1	0.36300							
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.40500							
130.05	L-Lysine, Pre-col AQC Der (%)	1	1	0.41500							
130.99	L-Lysine, Miscellaneous (%)	1	1	0.39500							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	4	4	0.19111	0.01274	0.19111	0.01274	0.00796	6.67%	0.00438	5.13%
131.01	Methionine, PAO Pre-col OPA Der (%)	1	1	0.18400							
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.18000							
131.99	Methionine, Miscellaneous (%)	1	1	0.18200							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	4	4	0.62883	0.02679	0.62883	0.02679	0.01674	4.26%	0.01035	4.29%
132.01	Phenylalanine, Pre-col OPA Der (%)	1	1	0.64450							
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.61500							
132.05	Phenylalanine, Pre-col AQC Der (%)	1	1	0.63500							
132.99	Phenylalanine, Miscellaneous (%)	1	1	0.62950							
133.00	Proline, Post-col Ninhydrin Der (%)	4	4	1.3646	0.06787	1.3646	0.06787	0.04242	4.97%	0.03263	3.82%
133.05	Proline, Pre-col AQC Der (%)	1	1	1.3950							
133.99	Proline, Miscellaneous (%)	3	3	1.2878	0.11203	1.2878	0.11203	0.08085	8.70%	0.00567	3.85%
134.00	Serine, Post-col Ninhydrin Der (%)	4	4	0.48415	0.04386	0.48415	0.04386	0.02741	9.06%	0.00940	4.46%

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
134.01	Serine, Pre-col OPA Der (%)	1	1	0.47600							
134.02	Serine, Post-col OPA Der (%)	1	1	0.46000							
134.05	Serine, Pre-col AQC Der (%)	1	1	0.50500							
134.99	Serine, Miscellaneous (%)	1	1	0.48500							
135.00	Threonine, Post-col Ninhydrin Der (%)	4	4	0.37764	0.01795	0.37764	0.01795	0.01122	4.75%	0.01093	4.63%
135.01	Threonine, Pre-col OPA Der (%)	1	1	0.36850							
135.02	Threonine, Post-col OPA Der (%)	1	1	0.36000							
135.05	Threonine, Pre-col AQC Der (%)	1	1	0.38500							
135.99	Threonine, Miscellaneous (%)	1	1	0.36450							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	2	2	0.15318	0.03794						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.18000							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	1	1	0.13500							
136.99	Tryptophan, Miscellaneous (%)	3	3	0.15433	0.01762	0.15433	0.01762	0.01272	11.42%	0.00533	5.30%
137.00	Tyrosine, Post-col Ninhydrin Der (%)	4	4	0.31113	0.02304	0.31113	0.02304	0.01440	7.41%	0.01640	4.77%
137.01	Tyrosine, Pre-col OPA Der (%)	1	1	0.38850							
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.26500							
137.05	Tyrosine, Pre-col AQC Der (%)	1	1	0.41000							
137.99	Tyrosine, Miscellaneous (%)	1	1	0.23600							
138.00	Valine, Post-col Ninhydrin Der (%)	4	4	0.59084	0.02178	0.59084	0.02178	0.01361	3.69%	0.01378	4.33%
138.01	Valine, Pre-col OPA Der (%)	1	1	0.58500							
138.02	Valine, Post-col OPA Der (%)	1	1	0.55500							
138.05	Valine, Pre-col AQC Der (%)	1	1	0.61500							
138.99	Valine, Miscellaneous (%)	1	1	0.57450							
139.00	Taurine, Post-col Ninhydrin Der (%)	3	3	0.07440	0.10461	0.07440	0.10461	0.09246	140.60%	0.01000	5.91%
139.99	Taurine, Miscellaneous (%)	1	1	0.15900							
160.99	Fructose, Miscellaneous (%)	4	1								
161.99	Galactose, Miscellaneous (%)	2		0.00000							
162.99	Glucose, Miscellaneous (%)	4	1								
163.99	Lactose, Miscellaneous (%)	3									
164.99	Maltose, Miscellaneous (%)	5	3	0.11500	0.02598	0.11500	0.02598	0.02296	22.59%	0.00333	5.54%
165.99	Sucrose, Miscellaneous (%)	5	4	1.0075	0.02901	1.0075	0.02901	0.02094	2.88%	0.04000	4.00%
400.01	Water activity, Aqualab chilled mirror (Units)	2	2	0.52153	0.00421						
516.00	Arsenic, total, AA, Hydride (mg / kg (ppm))	1	1	0.11500							
516.43	Arsenic, total, ICP, Microwave (mg / kg (ppm))	1		0.04500							
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	1	1	0.01200							
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	2	2	0.01750	0.01061						
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.01143	0.00075	0.01143	0.00075	0.00066	6.56%	0.00027	22.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	1	1	0.09300							

Test Material Code # 201744

Issue Date : 01/31/2018

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
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	1	1	0.02600							
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	1	1	0.08300							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1		0.00000							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.01000							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	0.41000							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1		0.00000							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.04500							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	0.29850							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	0.94150							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.03650							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1		0.00000							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	1		0.00000							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.04000							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.94650							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	1.7600							

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



Pet Food Scheme

Barley

Test Material Code # 201744

Method Precision Report

Methods Reported: 27

Labs Reporting: 56

Issue Date : 01/31/2018

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 (%)	11	9	10.891	0.61643	0.20120	0.13133	0.24027	1.80%	1.178%	2.16%	1.8295
002.06	Protein, Combustion Nitrogen Analyzer (%)	46	41	11.845	0.27401	0.21161	0.08348	0.22748	1.78%	0.704%	1.92%	2.7251
003.10	Fat, Soxtec, Pet Ether (%)	9	9	1.5182	0.11557	0.10525	0.06751	0.12504	6.93%	4.447%	8.24%	1.8522
003.14	Fat, Ankom (%)	10	9	1.5623	0.36799	0.24656	0.06428	0.25480	16.74%	4.364%	17.30%	3.9638
004.00	Fiber, Crude, Asbestos Free (%)	10	9	1.1170	0.21901	0.08183	0.04162	0.09180	7.77%	3.953%	8.72%	2.2058
004.07	Fiber, ANKOM (%)	17	16	1.2536	0.50428	0.10988	0.19004	0.21952	9.65%	16.695%	19.28%	1.1551
005.00	Ash, 2h @ 600°C (%)	30	28	1.3778	0.05993	0.04802	0.05304	0.07155	3.48%	3.847%	5.19%	1.3491
005.99	Ash, Miscellaneous (%)	9	8	1.4296	0.10575	0.08269	0.01527	0.08409	5.88%	1.086%	5.98%	5.5079
011.01	Loss on Drying, 135°C 2hr (%)	23	20	11.230	0.33910	0.21393	0.11810	0.24436	1.89%	1.045%	2.16%	2.0691
013.00	Fat, Acid hydrolysis (%)	11	10	2.4848	0.50909	0.52842	0.06720	0.53268	21.47%	2.730%	21.64%	7.9267
013.02	Fat, Mojonnier, Bak Ext (%)	12	10	2.7390	0.60062	0.31429	0.09996	0.32980	12.23%	3.891%	12.84%	3.2992
019.41	Calcium, ICP, Dry ash (%)	9	8	0.03354	0.00308	0.00305	0.00134	0.00333	9.02%	3.973%	9.86%	2.4810
019.43	Calcium, ICP, Microwave (%)	10	9	0.03668	0.01076	0.01094	0.00036	0.01095	29.06%	0.945%	29.08%	30.754
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	9	8	5.2819	0.82070	0.69858	0.17379	0.71987	13.64%	3.394%	14.06%	4.1422
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	13	13	36.667	5.4577	5.4131	0.98438	5.5019	14.76%	2.685%	15.01%	5.5892
027.41	Magnesium, ICP, Dry ash (%)	10	10	0.09603	0.00258		0.00372			3.872%		
027.43	Magnesium, ICP, Microwave (%)	9	8	0.09144	0.00933	0.00928	0.00134	0.00937	10.15%	1.471%	10.25%	6.9707
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	10	9	11.973	1.3752	0.86886	0.44819	0.97764	7.47%	3.851%	8.40%	2.1813
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	10	9	11.935	1.4311	0.88325	0.38837	0.96486	7.18%	3.159%	7.85%	2.4844
031.41	Phosphorus, ICP, Dry ash (%)	9	8	0.28361	0.02007	0.02102	0.00602	0.02187	7.42%	2.125%	7.71%	3.6306
031.43	Phosphorus, ICP, Microwave (%)	10	8	0.25056	0.08504	0.03370	0.00765	0.03456	12.41%	2.819%	12.73%	4.5157
032.41	Potassium, ICP, Dry ash (%)	10	9	0.35074	0.01961	0.01127	0.00548	0.01253	3.17%	1.540%	3.52%	2.2871
032.43	Potassium, ICP, Microwave (%)	11	10	0.34639	0.02964	0.03072	0.00741	0.03160	8.85%	2.134%	9.10%	4.2661
035.41	Sodium, ICP, Dry ash (%)	12	10	0.00823	0.00302	0.00193	0.00064	0.00204	25.71%	8.494%	27.07%	3.1872
035.43	Sodium, ICP, Microwave (%)	9	8	0.00738	0.00257	0.00256	0.00013	0.00257	34.76%	1.794%	34.81%	19.407
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	10	9	21.914	2.4969	2.4134	0.90574	2.5778	11.01%	4.133%	11.76%	2.8460
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	9	9	21.984	2.5685	2.5317	0.61299	2.6049	11.52%	2.788%	11.85%	4.2494

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