



**AAFCO**  
Proficiency Testing Program



**Pet Food Ingredient Scheme**

**Wheat Bran**

**Test Material Code # 201943**

**Method Summary Report**

(Precision Report Follows)

**# Labs Reporting: 59**

**# Methods Reported: 259**

**Issue Date : 09/30/2019**

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
001.00	Loss on Drying, Vac 95°C 5 hr (%)	2	2	9.649	0.5996						
001.03	Loss on Drying, Low temp. methods (%)	3	3	9.807	0.2789	9.807	0.2789	0.1610	2.84%	0.0600	2.84%
001.05	Loss on Drying, LECO (%)	1	1	10.05							
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	14	14	9.818	0.4524	9.844	0.2864	0.0957	2.91%	0.1387	2.84%
001.99	Loss on Drying, Miscellaneous (%)	6	6	9.323	0.3714	9.445	0.0919	0.0469	0.97%	0.1917	2.85%
002.00	Protein, Crude, Crude (%)	1	1	18.86							
002.01	Protein, Crude, Auto Kjel-Foss (%)	5	4	18.65	0.1239	18.65	0.1239	0.0620	0.66%	0.1330	2.32%
002.04	Protein, Crude, Copper Catalyst (%)	2	2	18.62	0.3642						
002.05	Protein, Crude, Copper, Boric Acid (%)	1	1	18.88							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	47	44	18.59	1.590	18.87	0.4279	0.0806	2.27%	0.1552	2.30%
002.08	Protein, Crude, Cu/Ti (%)	2	2	18.70	0.0672						
002.10	Protein, Crude, Block dig/distillation (%)	1	1	18.28							
002.11	Protein, Crude, NIR (%)	2	2	17.30	1.248						
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	1	1	3.425							
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	3.495							
003.06	Fat, Crude, Pet Ether (%)	3	3	4.170	1.161	4.170	1.161	0.6703	27.84%	0.0933	3.23%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	4	4	3.838	0.0600	3.838	0.0600	0.0300	1.56%	0.0377	3.27%
003.10	Fat, Crude, Randall, Pet Ether (%)	11	11	3.351	0.2213	3.323	0.1760	0.0663	5.30%	0.1544	3.34%
003.11	Fat, Crude, NIR (%)	2	2	4.170	0.7421						
003.12	Fat, Crude, Hexane Ext (%)	1	1	4.010							
003.13	Fat, Crude, Randall, Hexane Ext. (%)	3	3	5.003	2.446	5.003	2.446	1.729	48.88%	0.0588	3.14%
003.14	Fat, Crude, Ankom (%)	13	13	3.627	0.4083	3.541	0.2277	0.0790	6.43%	0.3323	3.31%
003.99	Fat, Crude, Miscellaneous (%)	1	1	2.150							
004.00	Fiber, Crude, Asbestos Free (%)	5	4	9.556	0.1995	9.556	0.1995	0.0997	2.09%	0.2675	2.85%
004.03	Fiber, Crude, Fritted Glass (%)	2	2	8.300	0.6718						
004.06	Fiber, Crude, Fibertec (%)	5	5	10.08	0.3031	10.08	0.3031	0.1356	3.01%	0.1274	2.83%
004.07	Fiber, Crude, ANKOM (%)	19	19	9.535	0.8809	9.605	0.6587	0.1889	6.86%	0.3837	2.85%
004.11	Fiber, Crude, NIR (%)	2	2	8.975	2.072						
005.00	Ash, 2h @ 600°C (%)	37	35	4.679	0.0769	4.679	0.0828	0.0175	1.77%	0.0768	3.17%
005.03	Ash, Microwave furnace (%)	1	1	4.715							

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005.05	Ash, 3h @ 550°C (%)	5	5	4.635	0.0504	4.635	0.0504	0.0225	1.09%	0.0340	3.18%
005.11	Ash, NIR (%)	1	1	6.680							
005.99	Ash, Miscellaneous (%)	3	3	4.515	0.1538	4.515	0.1538	0.1088	3.41%	0.1080	3.19%
006.00	Total Sugars, As sucrose (%)	1	1	6.484							
006.99	Total Sugars, Miscellaneous (%)	1	1	3.450							
008.02	Fiber, Acid Detergent, Crucible (%)	3	3	13.37	2.372	13.37	2.372	1.677	17.74%	0.4867	2.71%
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	7	7	11.79	1.085	11.97	0.7722	0.3648	6.45%	0.4963	2.75%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	1	1	12.70							
009.04	Fiber, Neutral Detergent, Neutral Det-No ENZ Pretreat (%)	1	1	36.92							
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	2	2	39.80	0.3048						
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	6	6	37.90	1.171	37.92	1.270	0.6482	3.35%	0.4257	1.62%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	1	1	27.51							
010.03	Moisture, Karl-Fischer (%)	1	1	9.250							
010.11	Moisture, NIR (%)	2	2	10.34	0.6611						
010.99	Moisture, Miscellaneous (%)	3	3	10.28	0.5305	10.28	0.5305	0.3063	5.16%	0.1167	2.82%
011.01	Loss on Drying, 135°C 2hr (%)	21	21	10.41	0.6093	10.50	0.3578	0.0976	3.41%	0.3136	2.81%
011.02	Loss on Drying, 130°C for 2 hours (%)	2	2	9.995	0.9051						
012.00	Starch, Polarimetric (Ewers) (%)	1	1	18.60							
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	3	3	12.97	2.386	12.97	2.386	1.377	18.39%	0.6512	2.72%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	4	4	15.44	1.411	15.44	1.411	0.7054	9.14%	0.7398	2.54%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	1	1	13.65							
012.11	Starch, NIR (%)	1	1	23.60							
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	8	8	5.133	1.504	5.403	0.9924	0.4386	18.37%	0.3800	3.10%
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	12	12	6.102	0.9910	6.115	0.6651	0.2400	10.88%	0.2143	3.05%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	3	3	4.797	0.5665	4.797	0.5665	0.3271	11.81%	0.1067	3.16%
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	2	2	7.537	0.7099						
014.99	Fiber, Total Dietary, Miscellaneous (%)	1	1	40.70							
015.41	Aluminum, ICP, Dry ash (mg / kg (ppm))	2	2	8.886	0.8142						
015.43	Aluminum, ICP, Microwave (mg / kg (ppm))	4	3	11.74	2.227	11.74	2.227	1.286	18.97%	1.374	11.04%
015.53	Aluminum, ICP-MS, Microwave (mg / kg (ppm))	2	2	12.44	1.259						
017.41	Boron, ICP, Dry ash (mg / kg (ppm))	1	1	2.091							
017.43	Boron, ICP, Microwave (mg / kg (ppm))	3	3	2.702	0.2779	2.702	0.2779	0.1965	10.28%	0.0525	13.77%
017.53	Boron, ICP-MS, Microwave (mg / kg (ppm))	1	1	25.11							
019.00	Calcium, Ox-Mn04 Vol. (%)	1	1	0.0845							
019.31	Calcium, AAS, Dry ash (%)	3	3	0.0997	0.0175	0.0997	0.0175	0.0124	17.56%	0.0208	5.66%
019.41	Calcium, ICP, Dry ash (%)	8	8	0.1106	0.0069	0.1101	0.0054	0.0024	4.88%	0.0017	5.58%
019.42	Calcium, ICP, Open vessel (%)	3	3	361.9	626.6	361.9	626.6	443.1	173.14%	5.674	0.53%
019.43	Calcium, ICP, Microwave (%)	11	11	0.1208	0.0111	0.1201	0.0107	0.0040	8.90%	0.0033	5.50%
019.44	Calcium, ICP, Dry ash (%)	5	5	0.1125	0.0047	0.1125	0.0047	0.0021	4.16%	0.0065	5.56%
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	1.170							

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019.53	Calcium, ICP-MS, Microwave (%)	3	3	0.1114	0.0084	0.1114	0.0084	0.0049	7.57%	0.0048	5.56%
019.99	Calcium, Miscellaneous (%)	3	3	0.1153	0.0105	0.1153	0.0105	0.0061	9.10%	0.0073	5.54%
021.31	Cobalt, AAS, Dry ash (mg / kg (ppm))	1		3.000							
021.41	Cobalt, ICP, Dry ash (mg / kg (ppm))	2	2	0.1745	0.1057						
021.43	Cobalt, ICP, Microwave (mg / kg (ppm))	3	3	0.1432	0.0696	0.1432	0.0696	0.0402	48.61%	0.0355	21.43%
021.53	Cobalt, ICP-MS, Microwave (mg / kg (ppm))	4	3	0.0931	0.0146	0.0931	0.0146	0.0084	15.70%	0.0033	22.00%
022.31	Copper, AAS, Dry ash (mg / kg (ppm))	2	2	14.27	3.415						
022.41	Copper, ICP, Dry ash (mg / kg (ppm))	7	7	12.70	1.791	12.41	1.136	0.5367	9.16%	1.159	10.95%
022.42	Copper, ICP, Open vessel (mg / kg (ppm))	3	3	10.75	1.834	10.75	1.834	1.059	17.05%	1.151	11.19%
022.43	Copper, ICP, Microwave (mg / kg (ppm))	10	10	12.90	1.075	12.90	1.219	0.4818	9.45%	0.6129	10.89%
022.44	Copper, ICP, Dry ash (mg / kg (ppm))	1	1	8.879							
022.52	Copper, ICP-MS, Open vessel (mg / kg (ppm))	1	1	11.40							
022.53	Copper, ICP-MS, Microwave (mg / kg (ppm))	4	4	11.67	0.8432	11.67	0.8432	0.4216	7.23%	0.7042	11.05%
022.99	Copper, Miscellaneous (mg / kg (ppm))	2	2	11.28	1.803						
025.31	Iron, AAS, Dry ash (mg / kg (ppm))	3	3	151.6	17.19	151.6	17.19	9.925	11.34%	10.42	7.51%
025.41	Iron, ICP, Dry ash (mg / kg (ppm))	7	7	134.8	5.959	134.8	6.758	3.193	5.01%	1.446	7.65%
025.42	Iron, ICP, Open vessel (mg / kg (ppm))	3	3	128.0	14.98	128.0	14.98	8.648	11.70%	4.784	7.71%
025.43	Iron, ICP, Microwave (mg / kg (ppm))	8	8	142.1	7.789	141.7	7.749	3.425	5.47%	3.835	7.59%
025.52	Iron, ICP-MS, Open vessel (mg / kg (ppm))	1	1	128.2							
025.53	Iron, ICP-MS, Microwave (mg / kg (ppm))	3	3	133.9	13.68	133.9	13.68	9.671	10.21%	7.690	7.65%
025.99	Iron, Miscellaneous (mg / kg (ppm))	3	3	136.8	12.41	136.8	12.41	8.772	9.07%	1.502	7.63%
027.31	Magnesium, AAS, Dry ash (%)	3	3	0.4374	0.0147	0.4374	0.0147	0.0085	3.35%	0.0105	4.53%
027.41	Magnesium, ICP, Dry ash (%)	8	8	0.4224	0.0185	0.4236	0.0183	0.0081	4.32%	0.0073	4.55%
027.42	Magnesium, ICP, Open vessel (%)	3	3	1,366	2,366	1,366	2,366	1,673	173.16%	62.34	0.27%
027.43	Magnesium, ICP, Microwave (%)	11	11	0.4312	0.0174	0.4312	0.0198	0.0074	4.58%	0.0090	4.54%
027.44	Magnesium, ICP, Dry ash (%)	5	4	0.4040	0.0041	0.4040	0.0041	0.0020	1.01%	0.0120	4.58%
027.52	Magnesium, ICP-MS, Open vessel (%)	1	1	0.4960							
027.53	Magnesium, ICP-MS, Microwave (%)	3	3	0.4297	0.0185	0.4297	0.0185	0.0107	4.31%	0.0042	4.54%
027.99	Magnesium, Miscellaneous (%)	2	2	0.4625	0.0248						
028.31	Manganese, AAS, Dry ash (mg / kg (ppm))	3	3	165.1	13.28	165.1	13.28	9.392	8.04%	1.863	7.42%
028.41	Manganese, ICP, Dry ash (mg / kg (ppm))	7	7	165.1	5.119	165.1	5.805	2.743	3.52%	2.012	7.42%
028.42	Manganese, ICP, Open vessel (mg / kg (ppm))	3	3	158.1	10.67	158.1	10.67	7.548	6.75%	3.437	7.47%
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	10	9	177.3	10.57	179.0	7.651	3.188	4.27%	2.809	7.33%
028.44	Manganese, ICP, Dry ash (mg / kg (ppm))	1	1	176.6							
028.52	Manganese, ICP-MS, Open vessel (mg / kg (ppm))	1	1	173.2							
028.53	Manganese, ICP-MS, Microwave (mg / kg (ppm))	3	3	165.1	13.16	165.1	13.16	7.600	7.98%	13.80	7.42%
028.99	Manganese, Miscellaneous (mg / kg (ppm))	2	2	181.3	15.91						
031.01	Phosphorus, Photometric (%)	8	8	0.8774	0.0261	0.8774	0.0296	0.0131	3.37%	0.0128	4.08%
031.03	Phosphorus, Autoanalyzer (%)	1	1	0.9315							
031.41	Phosphorus, ICP, Dry ash (%)	8	8	0.9113	0.0280	0.9113	0.0318	0.0140	3.49%	0.0190	4.06%

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031.42	Phosphorus, ICP, Open vessel (%)	4	3	0.9193	0.0253	0.9193	0.0253	0.0146	2.75%	0.0440	4.05%
031.43	Phosphorus, ICP, Microwave (%)	11	11	0.9168	0.0502	0.9185	0.0530	0.0200	5.77%	0.0151	4.05%
031.53	Phosphorus, ICP-MS, Microwave (%)	3	3	0.8765	0.0467	0.8765	0.0467	0.0269	5.32%	0.0228	4.08%
031.99	Phosphorus, Miscellaneous (%)	3	3	0.9400	0.0800	0.9400	0.0800			0.0000	4.04%
032.31	Potassium, AAS, Dry ash (%)	2	2	1.132	0.0113						
032.41	Potassium, ICP, Dry ash (%)	7	7	1.215	0.0452	1.215	0.0513	0.0242	4.22%	0.0201	3.88%
032.42	Potassium, ICP, Open vessel (%)	4	3	1.134	0.0704	1.134	0.0704	0.0406	6.21%	0.0553	3.92%
032.43	Potassium, ICP, Microwave (%)	11	11	1.203	0.0642	1.211	0.0489	0.0184	4.04%	0.0211	3.89%
032.44	Potassium, ICP, Dry ash (%)	5	5	1.148	0.0249	1.148	0.0249	0.0111	2.17%	0.0227	3.92%
032.53	Potassium, ICP-MS, Microwave (%)	3	3	1.182	0.0025	1.182	0.0025	0.0015	0.21%	0.0575	3.90%
032.99	Potassium, Miscellaneous (%)	3	3	1.204	0.0209	1.204	0.0209	0.0121	1.74%	0.0183	3.89%
033.01	Salt as chloride, Poten Cl (%)	6	4	0.0947	0.0172	0.0947	0.0172	0.0108		0.0000	5.70%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	0.1053	0.0005						
034.04	Selenium, AA, Hydride (mg / kg (ppm))	1	1	0.1443							
034.41	Selenium, ICP, Dry ash (mg / kg (ppm))	2	2	0.5303	0.6785						
034.43	Selenium, ICP, Microwave (mg / kg (ppm))	2	1	0.9350							
034.52	Selenium, ICP-MS, Open vessel (mg / kg (ppm))	2	2	0.2025	0.0035						
034.53	Selenium, ICP-MS, Microwave (mg / kg (ppm))	5	4	0.1131	0.0502	0.1131	0.0502	0.0251	44.40%	0.0311	22.00%
035.41	Sodium, ICP, Dry ash (%)	9	8	0.0103	0.0047	0.0103	0.0054	0.0024	52.15%	0.0020	7.97%
035.42	Sodium, ICP, Open vessel (%)	1	1	79.22							
035.43	Sodium, ICP, Microwave (%)	7	5	0.0079	0.0069	0.0079	0.0069	0.0008	87.77%	0.0004	8.30%
035.53	Sodium, ICP-MS, Microwave (%)	3	3	0.0026	0.0008	0.0026	0.0008	0.0005	29.66%	0.0005	9.78%
035.99	Sodium, Miscellaneous (%)	1		0.0100							
036.42	Sulfur, ICP, Open vessel (%)	3	3	681.0	1,179	681.0	1,179	833.7	173.14%	45.67	0.38%
036.43	Sulfur, ICP, Microwave (%)	6	6	0.2222	0.0163	0.2221	0.0182	0.0093	8.21%	0.0040	5.02%
036.53	Sulfur, ICP-MS, Microwave (%)	3	3	0.2394	0.0309	0.2394	0.0309	0.0178	12.90%	0.0121	4.96%
036.99	Sulfur, Miscellaneous (%)	1	1	0.2000							
037.31	Zinc, AAS, Dry ash (mg / kg (ppm))	3	3	80.51	2.954	80.51	2.954	1.706	3.67%	1.587	8.26%
037.41	Zinc, ICP, Dry ash (mg / kg (ppm))	7	6	81.28	6.379	81.28	7.233	3.691	8.90%	2.162	8.25%
037.42	Zinc, ICP, Open vessel (mg / kg (ppm))	3	3	82.57	4.194	82.57	4.194	2.421	5.08%	2.255	8.23%
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	10	10	87.82	6.587	88.14	6.707	2.651	7.61%	2.504	8.15%
037.44	Zinc, ICP, Dry ash (mg / kg (ppm))	1	1	76.61							
037.52	Zinc, ICP-MS, Open vessel (mg / kg (ppm))	1	1	80.00							
037.53	Zinc, ICP-MS, Microwave (mg / kg (ppm))	3	3	79.46	4.487	79.46	4.487	2.591	5.65%	2.753	8.28%
037.99	Zinc, Miscellaneous (mg / kg (ppm))	2	2	81.15	7.283						
038.41	Molybdenum, ICP, Dry ash (mg / kg (ppm))	2	2	0.3742	0.0413						
038.43	Molybdenum, ICP, Microwave (mg / kg (ppm))	3	3	0.3786	0.0324	0.3786	0.0324	0.0229	8.55%	0.0120	18.51%
038.53	Molybdenum, ICP-MS, Microwave (mg / kg (ppm))	5	4	0.3958	0.0213	0.3958	0.0213	0.0106	5.37%	0.0062	18.39%
040.53	Barium, ICP-MS, Microwave (mg / kg (ppm))	2	2	20.32	1.157						
041.53	Vanadium, ICP-MS, Microwave (mg / kg (ppm))	2	2	0.0398	0.0145						

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042.00	Chloride, Titrimetric (%)	1	1	0.0605							
101.02	Choline Chloride, LC (mg / kg (ppm))	1	1	1,720							
102.01	Niacin, Microbiological (mg / kg (ppm))	1	1	147.0							
102.02	Niacin, LC (mg / kg (ppm))	1	1	21.35							
103.01	Pantothenic Acid, Microbiological (mg / kg (ppm))	1	1	16.65							
103.02	Pantothenic Acid, LC (mg / kg (ppm))	1	1	16.02							
104.00	Riboflavin, Fluorometric (mg / kg (ppm))	1	1	3.010							
104.03	Riboflavin, LC (mg / kg (ppm))	1	1	2.395							
105.00	Thiamine, LC (mg / kg (ppm))	1	1	50.82							
105.01	Thiamine, Fluorometer (mg / kg (ppm))	1	1	8.830							
107.00	Vitamin B12, Microbiological (µg / kg (ppb))	1		4.400							
109.02	Vitamin E, LC (IU / kg)	1	1	29.90							
112.01	Pyridoxine, LC (µg / g)	2	2	4.990	4.879						
113.01	Folic Acid, Micro (mg / kg (ppm))	1	1	1.400							
120.00	Alanine, Post-col Ninhydrin Der (%)	5	5	0.8297	0.0414	0.8297	0.0414	0.0185	4.99%	0.0130	4.11%
120.05	Alanine, Pre-col AQC Der (%)	2	2	0.9220	0.0806						
120.99	Alanine, Miscellaneous (%)	1	1	0.7760							
121.00	Arginine, Post-col Ninhydrin Der (%)	5	5	1.193	0.0605	1.193	0.0605	0.0271	5.07%	0.0159	3.89%
121.05	Arginine, Pre-col AQC Der (%)	2	2	1.226	0.0902						
121.99	Arginine, Miscellaneous (%)	1	1	0.7469							
122.00	Aspartic, Post-col Ninhydrin Der (%)	5	5	1.246	0.0392	1.246	0.0392	0.0175	3.14%	0.0074	3.87%
122.05	Aspartic, Pre-col AQC Der (%)	2	2	1.214	0.0202						
122.99	Aspartic, Miscellaneous (%)	1	1	0.8740							
124.00	Cysteine/Cystine, PAO Post-col Ninhytri (%)	5	5	0.3996	0.0645	0.3996	0.0645	0.0288	16.13%	0.0062	4.59%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	2	2	0.3673	0.0887						
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.4460							
125.00	Glutamic, Post-col Ninhydrin Der (%)	5	5	3.974	0.1425	3.974	0.1425	0.0637	3.59%	0.0508	3.25%
125.05	Glutamic, Pre-col AQC Der (%)	2	2	4.197	0.0329						
125.99	Glutamic, Miscellaneous (%)	1	1	2.809							
126.00	Glycine, Post-col Ninhydrin Der (%)	5	5	0.9578	0.0292	0.9578	0.0292	0.0130	3.05%	0.0113	4.03%
126.05	Glycine, Pre-col AQC Der (%)	2	2	1.046	0.1778						
126.99	Glycine, Miscellaneous (%)	1	1	0.2877							
127.00	Histidine, Post-col Ninhydrin Der (%)	5	5	0.5149	0.0539	0.5149	0.0539	0.0241	10.46%	0.0148	4.42%
127.05	Histidine, Pre-col AQC Der (%)	2	2	0.4415	0.0120						
127.99	Histidine, Miscellaneous (%)	1	1	0.2877							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	5	5	0.5690	0.0405	0.5690	0.0405	0.0181	7.12%	0.0124	4.35%
128.05	Isoleucine, Pre-col AQC Der (%)	2	2	0.6555	0.1138						
128.99	Isoleucine, Miscellaneous (%)	1	1	0.5151							
129.00	Leucine, Post-col Ninhydrin Der (%)	5	5	1.112	0.0371	1.112	0.0371	0.0166	3.34%	0.0073	3.94%
129.05	Leucine, Pre-col AQC Der (%)	2	2	1.224	0.1114						

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
129.99	Leucine, Miscellaneous (%)	1	1	0.6243							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	5	5	0.7216	0.0456	0.7216	0.0456	0.0204	6.32%	0.0088	4.20%
130.05	L-Lysine, Pre-col AQC Der (%)	2	2	0.7533	0.0117						
130.99	L-Lysine, Miscellaneous (%)	1	1	1.394							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	5	5	0.2679	0.0070	0.2679	0.0070	0.0031	2.61%	0.0049	4.88%
131.05	Methionine, PAO Pre-col AQC Der (%)	2	2	0.3485	0.0545						
131.99	Methionine, Miscellaneous (%)	1	1	0.3323							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	5	5	0.7486	0.0103	0.7486	0.0103	0.0046	1.38%	0.0070	4.18%
132.05	Phenylalanine, Pre-col AQC Der (%)	2	2	0.7725	0.0318						
132.99	Phenylalanine, Miscellaneous (%)	1	1	0.5887							
133.00	Proline, Post-col Ninhydrin Der (%)	5	5	1.266	0.0453	1.266	0.0453	0.0203	3.58%	0.0429	3.86%
133.05	Proline, Pre-col AQC Der (%)	2	2	1.521	0.3129						
133.99	Proline, Miscellaneous (%)	1	1	1.115							
134.00	Serine, Post-col Ninhydrin Der (%)	5	4	0.8247	0.0554	0.8247	0.0554	0.0277	6.72%	0.0063	4.12%
134.05	Serine, Pre-col AQC Der (%)	2	2	0.7215	0.1464						
134.99	Serine, Miscellaneous (%)	1	1	0.6578							
135.00	Threonine, Post-col Ninhydrin Der (%)	5	5	0.5962	0.0223	0.5962	0.0223	0.0100	3.74%	0.0074	4.32%
135.05	Threonine, Pre-col AQC Der (%)	2	2	0.5218	0.1531						
135.99	Threonine, Miscellaneous (%)	1	1	0.4638							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	4	4	0.2821	0.0469	0.2821	0.0469	0.0235	16.63%	0.0217	4.84%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	1	1	0.3337							
136.05	Tryptophan, Pre-col AQC Der (%)	1	1	0.1285							
136.99	Tryptophan, Miscellaneous (%)	2	2	0.2569	0.0876						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	4	4	0.4608	0.0240	0.4608	0.0240	0.0120	5.21%	0.0111	4.49%
137.05	Tyrosine, Pre-col AQC Der (%)	2	2	0.3930	0.2857						
137.99	Tyrosine, Miscellaneous (%)	1	1	0.3189							
138.00	Valine, Post-col Ninhydrin Der (%)	5	5	0.8367	0.0402	0.8367	0.0402	0.0180	4.80%	0.0201	4.11%
138.05	Valine, Pre-col AQC Der (%)	2	2	0.9715	0.1860						
138.99	Valine, Miscellaneous (%)	1	1	0.5597							
139.00	Taurine, Post-col Ninhydrin Der (%)	1	1	0.1000							
139.05	Taurine, Pre-col AQC Der (%)	1	1	0.0085							
160.99	Fructose, Miscellaneous (%)	2	1	0.0501							
162.99	Glucose, Miscellaneous (%)	2	1	0.0710							
163.99	Lactose, Miscellaneous (%)	2		0.0000							
164.99	Maltose, Miscellaneous (%)	2	1	0.9000							
165.99	Sucrose, Miscellaneous (%)	3	3	2.348	0.1748	2.348	0.1748	0.1009	7.44%	0.1833	3.52%
166.99	Raffinose, Miscellaneous (%)	1	1	1.370							
167.99	Stachyose, Miscellaneous (%)	1	1	0.6925							
400.01	Water Activity, Aqualab chilled mirror (Units)	1	1	0.5060							
400.99	Water Activity, Miscellaneous (Units)	1	1	0.5160							

Test Material Code # 201943

(Precision Report Follows)

Issue Date : 09/30/2019

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
516.00	Arsenic, Total, AA, Hydride (mg / kg (ppm))	1	1	0.1305							
516.43	Arsenic, Total, ICP, Microwave (mg / kg (ppm))	2	1	1.426							
516.53	Arsenic, Total, ICP-MS, Microwave (mg / kg (ppm))	4	4	0.0229	0.0058	0.0229	0.0058	0.0029	25.35%	0.0089	22.00%
518.41	Cadmium, ICP, Dry ash (mg / kg (ppm))	2	2	0.0465	0.0063						
518.43	Cadmium, ICP, Microwave (mg / kg (ppm))	2	1	0.0381							
518.53	Cadmium, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.0395	0.0042	0.0395	0.0042	0.0024	10.65%	0.0012	22.00%
520.41	Chromium, ICP, Dry ash (mg / kg (ppm))	2	2	0.5094	0.3432						
520.43	Chromium, ICP, Microwave (mg / kg (ppm))	2	2	0.4227	0.0533						
520.53	Chromium, ICP-MS, Microwave (mg / kg (ppm))	3	3	0.3186	0.3003	0.3186	0.3003	0.1734	94.26%	0.0283	19.00%
526.41	Lead, ICP, Dry ash (mg / kg (ppm))	2		0.0192							
526.43	Lead, ICP, Microwave (mg / kg (ppm))	1	1	0.1380							
526.53	Lead, ICP-MS, Microwave (mg / kg (ppm))	3	2	0.0130	0.0000	0.0130	0.0000			0.0009	22.00%
529.99	Mercury, Miscellaneous (µg / kg (ppb))	1	1	1,786							
539.41	Nickel, ICP, Dry ash (mg / kg (ppm))	2	2	1.116	0.0004						
539.43	Nickel, ICP, Microwave (mg / kg (ppm))	1	1	1.255							
539.53	Nickel, ICP-MS, Microwave (mg / kg (ppm))	3	3	1.244	0.3081	1.244	0.3081	0.2179	24.77%	0.2643	15.48%
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1		0.0100							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.0100							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	0.6600							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1		0.0100							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.0600							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	0.8450							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	2.295							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.1550							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1		0.0100							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w))	1		0.0100							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.1700							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	1	1	2.305							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	4.075							

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.



Pet Food Ingredient Scheme

# Methods Reported: 19

Wheat Bran

Method Precision Report

# Labs Reporting: 59

Test Material Code # 201943

Issue Date : 09/30/2019

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 %rstd	Reproducibility %RSD	sR/sr
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	14	13	9.818	0.4524	0.2930	0.1283	0.3199	2.96%	1.30%	3.23%	2.493
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	47	43	18.59	1.590	0.6131	0.1399	0.6289	3.26%	0.74%	3.34%	4.494
003.10	Fat, Crude, Randall, Pet Ether (%)	11	10	3.351	0.2213	0.1028	0.1239	0.1610	3.12%	3.76%	4.88%	1.299
003.14	Fat, Crude, Ankom (%)	13	13	3.627	0.4083	0.3425	0.3143	0.4648	9.44%	8.67%	12.82%	1.479
004.07	Fiber, Crude, ANKOM (%)	19	17	9.535	0.8809	0.5884	0.2899	0.6560	6.08%	2.99%	6.78%	2.263
005.00	Ash, 2h @ 600°C (%)	37	34	4.679	0.0769	0.0586	0.0708	0.0919	1.25%	1.51%	1.96%	1.298
011.01	Loss on Drying, 135°C 2hr (%)	21	20	10.41	0.6093	0.2198	0.2858	0.3605	2.09%	2.72%	3.43%	1.262
013.02	Fat, Acid Pretreat, Mojonner, Bak Ext (%)	12	12	6.102	0.9910	0.9812	0.1963	1.001	16.08%	3.22%	16.40%	5.098
019.43	Calcium, ICP, Microwave (%)	11	11	0.1208	0.0111	0.0108	0.0033	0.0113	8.94%	2.76%	9.35%	3.393
022.43	Copper, ICP, Microwave (mg / kg (ppm))	10	9	12.90	1.075	1.035	0.4535	1.130	8.09%	3.54%	8.83%	2.493
027.41	Magnesium, ICP, Dry ash (%)	8	8	0.4224	0.0185	0.0177	0.0076	0.0193	4.20%	1.81%	4.57%	2.531
027.43	Magnesium, ICP, Microwave (%)	11	10	0.4312	0.0174	0.0171	0.0063	0.0182	3.98%	1.47%	4.24%	2.887
028.43	Manganese, ICP, Microwave (mg / kg (ppm))	10	8	177.3	10.57	5.273	2.468	5.822	2.92%	1.37%	3.23%	2.359
031.01	Phosphorus, Photometric (%)	8	8	0.8774	0.0261	0.0249	0.0112	0.0273	2.83%	1.27%	3.11%	2.442
031.41	Phosphorus, ICP, Dry ash (%)	8	8	0.9113	0.0280	0.0254	0.0167	0.0304	2.79%	1.83%	3.34%	1.820
031.43	Phosphorus, ICP, Microwave (%)	11	11	0.9168	0.0502	0.0494	0.0126	0.0510	5.38%	1.38%	5.56%	4.035
032.43	Potassium, ICP, Microwave (%)	11	9	1.203	0.0642	0.0295	0.0152	0.0332	2.44%	1.26%	2.74%	2.185
035.41	Sodium, ICP, Dry ash (%)	9	8	0.0103	0.0047	0.0045	0.0019	0.0049	44.01%	18.84%	47.88%	2.541
037.43	Zinc, ICP, Microwave (mg / kg (ppm))	10	10	87.82	6.587	6.313	2.660	6.850	7.19%	3.03%	7.80%	2.575

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