



AAFCO
Association of American Feed Control Officials



Pet Food Ingredient Scheme

Pork Meal

Test Material Code # 202243

Method Summary Report

(Precision Report Follows)

Labs Reporting: 81

Methods Reported: 277

Issue Date : 09/30/2022

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO #fp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	34	33	4.424	0.1520	4.426	0.1393	0.0303	3.15%	0.1187	3.20%
001.99	Loss on Drying, Miscellaneous (%)	11	10	4.193	0.3879	4.164	0.3715	0.1469	8.92%	0.0550	3.23%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	3	3	4.058	0.1469	4.058	0.1469	0.0848	3.62%	0.1647	3.24%
001.03	Loss on Drying, Low temp. methods (%)	2	2	4.375	0.3889						
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	62	62	55.46	1.070	55.42	0.8961	0.1423	1.62%	0.8335	1.34%
002.01	Protein, Crude, Auto Kjeh-Foss (%)	6	6	54.68	0.9736	54.68	1.104	0.5634	2.02%	0.3373	1.35%
002.11	Protein, Crude, NIR (%)	2	2	55.60	0.9122						
002.00	Protein, Crude, Crude (%)	1	1	54.57							
002.04	Protein, Crude, Copper Catalyst (%)	1	1	56.03							
002.05	Protein, Crude, Copper, Boric Acid (%)	1	1	53.45							
002.08	Protein, Crude, Cu/Ti (%)	1	1	55.67							
002.09	Protein, Crude, Selenium Catalyst (%)	1	1	56.20							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	53.90							
003.14	Fat, Crude, Ankom (%)	13	13	15.07	0.9055	14.88	0.3328	0.1154	2.24%	0.2500	2.59%
003.10	Fat, Crude, Randall, Pet Ether (%)	8	8	14.80	0.6015	14.80	0.6820	0.3014	4.61%	0.3957	2.60%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	4	4	14.89	0.2802	14.89	0.2802	0.1401	1.88%	0.1557	2.59%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	5	3	16.59	0.1677	16.59	0.1677	0.0968	1.01%	0.1567	2.46%
003.06	Fat, Crude, Pet Ether (%)	2	2	15.35	0.0460						
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	2	2	14.84	0.1810						
003.11	Fat, Crude, NIR (%)	2	2	15.85	0.2475						
003.99	Fat, Crude, Miscellaneous (%)	2	2	15.84	0.9192						
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	14.48							
003.12	Fat, Crude, Hexane Ext (%)	1	1	15.70							
004.07	Fiber, Crude, ANKOM (%)	19	19	1.890	0.5099	1.896	0.5663	0.1624	29.87%	0.1972	3.63%
004.00	Fiber, Crude, Asbestos Free (%)	8	8	1.925	0.6774	1.893	0.6943	0.3068	36.67%	0.3241	3.63%
004.06	Fiber, Crude, Fibertec (%)	3	3	1.714	0.2448	1.714	0.2448	0.1413	14.28%	0.1500	3.69%
004.03	Fiber, Crude, Fritted Glass (%)	1	1	1.595							
004.11	Fiber, Crude, NIR (%)	1	1	0.6850							
004.99	Fiber, Crude, Miscellaneous (%)	1	1	1.270							

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005.00	Ash, 2h @ 600°C (%)	46	45	19.22	0.4605	19.22	0.4729	0.0881	2.46%	0.4951	2.28%
005.05	Ash, 3h @ 550°C (%)	12	12	19.24	0.3975	19.25	0.3999	0.1443	2.08%	0.3388	2.28%
005.99	Ash, Miscellaneous (%)	5	5	19.26	0.5825	19.26	0.5825	0.2605	3.02%	0.4440	2.28%
005.03	Ash, Microwave furnace (%)	2	2	19.22	0.3995						
005.11	Ash, NIR (%)	2	2	12.29	2.662						
006.00	Total Sugars, As sucrose (%)	1		0.5000							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	9	8	4.695	2.994	4.312	2.431	1.075	56.39%	0.3139	3.21%
008.02	Fiber, Acid Detergent, Crucible (%)	2	2	3.277	0.7612						
008.99	Fiber, Acid Detergent, Miscellaneous (%)	1	1	3.919							
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	5	5	30.67	6.599	30.67	6.599	2.951	21.52%	0.6806	1.81%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	1	1	32.70							
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	1	1	21.37							
010.99	Moisture, Miscellaneous (%)	5	4	4.751	0.6077	4.751	0.6077	0.3508	12.79%	0.0175	3.16%
010.11	Moisture, NIR (%)	2	2	5.820	0.8627						
010.03	Moisture, Karl-Fischer (%)	1	1	4.455							
011.01	Loss on Drying, HT, 135°C 2hr (%)	20	20	4.956	0.3942	4.927	0.2873	0.0803	5.83%	0.1511	3.15%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	2	2	4.930	0.1768						
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	3	3	2.310	0.4332	2.310	0.4332	0.2501	18.75%	0.4657	3.53%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	1	1	2.335							
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	1	1	1.600							
012.11	Starch, NIR (%)	1	1	19.51							
012.00	Starch, Polarimetric (Ewers) (%)	3									
013.02	Fat, Acid Pretreat, Mojonier, Bak Ext (%)	22	21	16.77	0.3205	16.76	0.2935	0.0801	1.75%	0.2751	2.44%
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	11	11	15.54	1.320	15.72	0.9629	0.3629	6.13%	1.036	2.52%
013.13	Fat, Acid Pretreat, Ankom- Acid Hydrolysis (%)	3	3	16.44	0.2586	16.44	0.2586	0.1493	1.57%	0.7716	2.47%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	2	2	16.21	0.4278						
015.41	Aluminum, ICP, Dry ash (ppm)	2	2	33.36	1.220						
015.43	Aluminum, ICP, Microwave (ppm)	2	2	25.69	20.77						
015.53	Aluminum, ICP-MS, Microwave (ppm)	2	2	35.85	0.7782						
017.43	Boron, ICP, Microwave (ppm)	2	2	0.9575	0.0602						
017.41	Boron, ICP, Dry ash (ppm)	1	1	1.308							
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	0.7333							
019.44	Calcium, ICP, Dry ash (%)	19	19	6.177	0.2130	6.181	0.2131	0.0611	3.45%	0.2102	3.04%
019.43	Calcium, ICP, Microwave (%)	14	14	6.012	0.3978	6.012	0.4511	0.1507	7.50%	0.1968	3.05%
019.41	Calcium, ICP, Dry ash (%)	13	13	6.052	0.9264	6.245	0.4132	0.1433	6.62%	0.1672	3.04%
019.42	Calcium, ICP, Open vessel (%)	4	4	5.904	1.106	5.904	1.106	0.5530	18.73%	0.2298	3.06%
019.53	Calcium, ICP-MS, Microwave (%)	3	3	5.683	0.5927	5.683	0.5927	0.3422	10.43%	0.4129	3.08%
019.99	Calcium, Miscellaneous (%)	3	3	5.578	0.8950	5.578	0.8950	0.5167	16.04%	0.1300	3.09%
019.31	Calcium, AAS, Dry ash (%)	2	2	6.390	0.1414						
019.00	Calcium, Ox-Mn04 Vol. (%)	1	1	6.350							

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019.52	Calcium, ICP-MS, Open vessel (%)	1	1	8.185							
021.41	Cobalt, ICP, Dry ash (ppm)	3	2	0.2481	0.2589	0.2481	0.2589			0.0270	19.73%
021.43	Cobalt, ICP, Microwave (ppm)	2	2	0.2538	0.2883						
021.53	Cobalt, ICP-MS, Microwave (ppm)	2	2	0.0617	0.0004						
022.43	Copper, ICP, Microwave (ppm)	13	13	35.43	3.638	34.92	2.663	0.9231	7.63%	1.367	9.37%
022.41	Copper, ICP, Dry ash (ppm)	5	5	31.93	4.985	31.93	4.985	2.229	15.61%	3.386	9.50%
022.42	Copper, ICP, Open vessel (ppm)	4	4	33.70	6.128	33.70	6.128	3.064	18.18%	1.833	9.42%
022.31	Copper, AAS, Dry ash (ppm)	3	3	35.32	3.453	35.32	3.453	1.994	9.78%	0.7333	9.36%
022.44	Copper, ICP, Dry ash (ppm)	3	3	34.57	3.580	34.57	3.580	2.067	10.36%	1.017	9.39%
022.53	Copper, ICP-MS, Microwave (ppm)	3	3	32.27	2.403	32.27	2.403	1.388	7.45%	1.421	9.48%
022.99	Copper, Miscellaneous (ppm)	2	2	28.00	5.657						
022.33	Copper, AAS, Microwave (ppm)	1	1	39.30							
022.52	Copper, ICP-MS, Open vessel (ppm)	1	1	27.10							
025.43	Iron, ICP, Microwave (ppm)	12	11	340.1	32.50	337.2	29.76	11.22	8.82%	11.07	6.66%
025.41	Iron, ICP, Dry ash (ppm)	8	8	334.5	38.38	334.5	43.52	19.23	13.01%	23.64	6.67%
025.31	Iron, AAS, Dry ash (ppm)	3	3	352.7	18.59	352.7	18.59	13.15	5.27%	7.300	6.62%
025.42	Iron, ICP, Open vessel (ppm)	3	3	320.7	42.77	320.7	42.77	24.69	13.34%	53.46	6.71%
025.53	Iron, ICP-MS, Microwave (ppm)	3	3	323.5	27.73	323.5	27.73	16.01	8.57%	4.746	6.70%
025.99	Iron, Miscellaneous (ppm)	2	2	302.0	25.46						
025.52	Iron, ICP-MS, Open vessel (ppm)	1	1	494.5							
027.44	Magnesium, ICP, Dry ash (%)	18	18	0.2075	0.0103	0.2089	0.0075	0.0022	3.61%	0.0057	5.06%
027.41	Magnesium, ICP, Dry ash (%)	13	13	0.2061	0.0164	0.2061	0.0186	0.0065	9.03%	0.0062	5.07%
027.43	Magnesium, ICP, Microwave (%)	11	11	0.1923	0.0127	0.1924	0.0142	0.0054	7.40%	0.0078	5.13%
027.42	Magnesium, ICP, Open vessel (%)	3	3	0.1780	0.0376	0.1780	0.0376	0.0217	21.13%	0.0087	5.19%
027.53	Magnesium, ICP-MS, Microwave (%)	3	3	0.1969	0.0035	0.1969	0.0035	0.0020	1.79%	0.0075	5.11%
027.31	Magnesium, AAS, Dry ash (%)	2	2	0.2043	0.0060						
027.99	Magnesium, Miscellaneous (%)	2	2	0.1625	0.0530						
028.41	Manganese, ICP, Dry ash (ppm)	16	16	20.70	1.678	20.70	1.903	0.5947	9.19%	0.5240	10.14%
028.43	Manganese, ICP, Microwave (ppm)	12	12	20.56	2.708	20.14	1.840	0.6639	9.13%	0.7726	10.18%
028.44	Manganese, ICP, Dry ash (ppm)	8	8	21.28	2.404	21.28	2.726	1.205	12.81%	0.4875	10.10%
028.42	Manganese, ICP, Open vessel (ppm)	4	4	17.55	1.775	17.55	1.775	0.8877	10.12%	0.9578	10.39%
028.31	Manganese, AAS, Dry ash (ppm)	3	3	20.85	2.691	20.85	2.691	1.554	12.91%	1.083	10.13%
028.53	Manganese, ICP-MS, Microwave (ppm)	3	3	20.52	0.5346	20.52	0.5346	0.3087	2.60%	1.265	10.15%
028.99	Manganese, Miscellaneous (ppm)	2	2	17.75	2.475						
028.52	Manganese, ICP-MS, Open vessel (ppm)	1	1	25.95							
031.44	Phosphorus, ICP, Dry ash (%)	19	19	3.311	0.0859	3.317	0.0705	0.0202	2.13%	0.1081	3.34%
031.43	Phosphorus, ICP, Microwave (%)	14	14	3.345	0.1900	3.354	0.1923	0.0643	5.73%	0.1543	3.33%
031.41	Phosphorus, ICP, Dry ash (%)	13	13	3.359	0.1884	3.345	0.1786	0.0619	5.34%	0.1525	3.34%
031.42	Phosphorus, ICP, Open vessel (%)	5	5	3.170	0.4998	3.170	0.4998	0.2235	15.77%	0.1371	3.36%
031.01	Phosphorus, Photometric (%)	3	3	3.340	0.0458	3.340	0.0458	0.0265	1.37%	0.0333	3.34%

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031.53	Phosphorus, ICP-MS, Microwave (%)	3	3	3.793	0.7496	3.793	0.7496	0.4328	19.76%	0.2396	3.27%
031.99	Phosphorus, Miscellaneous (%)	3	3	2.703	0.7201	2.703	0.7201	0.4158	26.64%	0.0933	3.44%
032.44	Potassium, ICP, Dry ash (%)	18	18	0.6876	0.0300	0.6896	0.0291	0.0086	4.22%	0.0124	4.23%
032.41	Potassium, ICP, Dry ash (%)	15	15	0.6551	0.0491	0.6567	0.0521	0.0168	7.94%	0.0253	4.26%
032.43	Potassium, ICP, Microwave (%)	13	13	0.6435	0.0288	0.6460	0.0267	0.0093	4.14%	0.0162	4.27%
032.42	Potassium, ICP, Open vessel (%)	5	5	0.6347	0.0388	0.6347	0.0388	0.0173	6.11%	0.0288	4.28%
032.31	Potassium, AAS, Dry ash (%)	3	3	0.6235	0.0313	0.6235	0.0313	0.0181	5.02%	0.0083	4.29%
032.53	Potassium, ICP-MS, Microwave (%)	3	3	0.6882	0.0970	0.6882	0.0970	0.0686	14.09%	0.0098	4.23%
032.99	Potassium, Miscellaneous (%)	2	2	0.6350	0.0354						
033.01	Salt as chloride, Poten Cl (%)	6	6	0.8231	0.0423	0.8231	0.0480	0.0245	5.83%	0.0075	4.12%
033.00	Salt as chloride, Sol Cl (%)	1	1	0.8308							
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	3	3	0.7309	0.1486	0.7309	0.1486	0.0858	20.33%	0.0165	16.77%
034.51	Selenium, Total (Se), ICP-MS, Dry Ash (ppm)	1	1	0.6050							
035.41	Sodium, ICP, Dry ash (%)	31	30	0.6387	0.0482	0.6395	0.0527	0.0120	8.24%	0.0161	4.28%
035.43	Sodium, ICP, Microwave (%)	13	13	0.5868	0.0170	0.5882	0.0126	0.0044	2.14%	0.0166	4.33%
035.31	Sodium, AAS, Dry ash (%)	3	3	0.5885	0.0318	0.5885	0.0318	0.0183	5.40%	0.0183	4.33%
035.53	Sodium, ICP-MS, Microwave (%)	3	3	0.6252	0.0648	0.6252	0.0648	0.0374	10.36%	0.0089	4.29%
035.42	Sodium, ICP, Open vessel (%)	2	2	0.5961	0.0409						
035.99	Sodium, Miscellaneous (%)	2	2	0.4275	0.1662						
036.43	Sulfur, ICP, Microwave (%)	10	9	0.4891	0.0598	0.4833	0.0537	0.0224	11.10%	0.0176	4.46%
036.42	Sulfur, ICP, Open vessel (%)	3	3	0.4346	0.0358	0.4346	0.0358	0.0207	8.24%	0.0131	4.53%
036.99	Sulfur, Miscellaneous (%)	2	2	0.4425	0.0248						
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.8000							
037.43	Zinc, ICP, Microwave (ppm)	13	13	139.7	13.12	139.7	12.54	4.347	8.98%	7.085	7.61%
037.41	Zinc, ICP, Dry ash (ppm)	6	6	139.7	7.196	139.7	8.161	4.164	5.84%	1.990	7.61%
037.31	Zinc, AAS, Dry ash (ppm)	3	3	155.5	18.92	155.5	18.92	10.93	12.17%	3.533	7.48%
037.42	Zinc, ICP, Open vessel (ppm)	4	3	122.4	4.587	122.4	4.587	2.649	3.75%	1.410	7.76%
037.53	Zinc, ICP-MS, Microwave (ppm)	3	3	135.1	22.65	135.1	22.65	13.08	16.76%	8.047	7.64%
037.44	Zinc, ICP, Dry ash (ppm)	2	2	132.8	5.381						
037.99	Zinc, Miscellaneous (ppm)	2	2	126.5	13.44						
037.33	Zinc, AAS, Microwave (ppm)	1	1	147.8							
037.52	Zinc, ICP-MS, Open vessel (ppm)	1	1	97.36							
038.53	Molybdenum, ICP-MS, Microwave (ppm)	3	3	0.5569	0.0054	0.5569	0.0054	0.0031	0.97%	0.0132	17.47%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	0.5115	0.0091						
038.43	Molybdenum, ICP, Microwave (ppm)	2	2	0.5207	0.0414						
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	1.877							
041.53	Vanadium, ICP-MS, Microwave (ppm)	2	2	0.1396	0.0029						
042.00	Chloride, Titrimetric (%)	1	1	0.4550							
042.99	Chloride, Miscellaneous (%)	1	1	0.5050							
101.02	Choline Chloride, LC (ppm)	1	1	2,485							

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102.01	Niacin, Microbiological (ppm)	1	1	96.55							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	6.155							
104.03	Riboflavin, LC (ppm)	1	1	8.560							
105.00	Thiamine, LC (ppm)	1		0.5000							
106.02	Vitamin A, LC (KU / kg)	5	2	0.6203	0.5236	0.6203	0.5236			0.1495	
107.00	Vitamin B12, Microbiological (ppb)	1	1	206.0							
108.02	Vitamin D3, LC (KU / kg)	1		0.0400							
109.02	Vitamin E, LC (IU / kg)	5	3	5.807	5.007	5.807	5.007	2.891	86.22%	0.5000	
112.01	Pyridoxine, LC (µg / g)	1	1	1.975							
113.01	Folic Acid, Micro (ppm)	1	1	1.830							
114.01	Biotin, Microbiological (ppm)	1	1	0.3725							
118.99	Peroxide value, Miscellaneous (meq/kg)	1	1	79.51							
120.00	Alanine, Post-col Ninhydrin Der (%)	4	4	3.807	0.1532	3.807	0.1532	0.0766	4.02%	0.1902	3.27%
120.99	Alanine, Miscellaneous (%)	3	3	3.821	0.2195	3.821	0.2195	0.1552	5.74%	0.1007	3.27%
120.02	Alanine, Post-col OPA Der (%)	1	1	3.605							
120.05	Alanine, Pre-col AQC Der (%)	1	1	3.420							
121.00	Arginine, Post-col Ninhydrin Der (%)	4	3	3.718	0.0938	3.718	0.0938	0.0541	2.52%	0.0643	3.28%
121.99	Arginine, Miscellaneous (%)	3	3	3.902	0.5785	3.902	0.5785	0.4091	14.83%	0.1247	3.26%
121.02	Arginine, Post-col OPA Der (%)	1	1	3.500							
121.05	Arginine, Pre-col AQC Der (%)	1	1	3.500							
122.99	Aspartic, Miscellaneous (%)	3	3	3.816	0.6329	3.816	0.6329	0.3654	16.58%	0.0933	3.27%
122.00	Aspartic, Post-col Ninhydrin Der (%)	4	2	4.192	0.0306	4.192	0.0306			0.0636	3.22%
122.02	Aspartic, Post-col OPA Der (%)	1	1	3.920							
122.05	Aspartic, Pre-col AQC Der (%)	1	1	4.200							
124.00	Cysteine/Cystine, PAO Post-col Ninhydrin Der (%)	5	5	0.4500	0.0786	0.4500	0.0786	0.0351	17.46%	0.0509	4.51%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	1	1	0.4700							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.5800							
125.00	Glutamic, Post-col Ninhydrin Der (%)	4	4	6.699	0.2328	6.699	0.2328	0.1164	3.47%	0.2932	3.00%
125.99	Glutamic, Miscellaneous (%)	3	3	6.427	0.5879	6.427	0.5879	0.4157	9.15%	0.2127	3.02%
125.02	Glutamic, Post-col OPA Der (%)	1	1	7.410							
125.05	Glutamic, Pre-col AQC Der (%)	1	1	6.015							
126.00	Glycine, Post-col Ninhydrin Der (%)	4	4	6.620	0.1743	6.620	0.1743	0.0871	2.63%	0.4986	3.01%
126.99	Glycine, Miscellaneous (%)	3	3	4.911	3.496	4.911	3.496	2.472	71.20%	0.0830	3.15%
126.02	Glycine, Post-col OPA Der (%)	1	1	6.190							
126.05	Glycine, Pre-col AQC Der (%)	1	1	5.685							
127.00	Histidine, Post-col Ninhydrin Der (%)	4	4	1.115	0.0178	1.115	0.0178	0.0089	1.60%	0.0293	3.93%
127.99	Histidine, Miscellaneous (%)	3	3	0.9832	0.1250	0.9832	0.1250	0.0722	12.71%	0.0483	4.01%
127.02	Histidine, Post-col OPA Der (%)	1	1	1.010							
127.05	Histidine, Pre-col AQC Der (%)	1	1	0.9950							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	4	4	1.580	0.1455	1.580	0.1455	0.0727	9.21%	0.0663	3.73%

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
128.99	Isoleucine, Miscellaneous (%)	3	3	1.668	0.1123	1.668	0.1123	0.0794	6.73%	0.0597	3.70%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	1.525							
128.05	Isoleucine, Pre-col AQC Der (%)	1	1	1.645							
129.00	Leucine, Post-col Ninhydrin Der (%)	4	4	3.340	0.1353	3.340	0.1353	0.0677	4.05%	0.0938	3.34%
129.99	Leucine, Miscellaneous (%)	3	3	3.466	0.2234	3.466	0.2234	0.1290	6.45%	0.1713	3.32%
129.02	Leucine, Post-col OPA Der (%)	1	1	3.190							
129.05	Leucine, Pre-col AQC Der (%)	1	1	3.515							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	4	4	3.109	0.1434	3.109	0.1434	0.0717	4.61%	0.1060	3.37%
130.99	L-Lysine, Miscellaneous (%)	3	3	2.970	0.2783	2.970	0.2783	0.1968	9.37%	0.1217	3.40%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	2.810							
130.05	L-Lysine, Pre-col AQC Der (%)	1	1	3.100							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	5	5	0.8313	0.0849	0.8313	0.0849	0.0380	10.21%	0.0660	4.11%
131.99	Methionine, Miscellaneous (%)	2	2	0.8800	0.0071						
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.8150							
131.05	Methionine, PAO Pre-col AQC Der (%)	1	1	1.100							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	4	4	2.031	0.0828	2.031	0.0828	0.0414	4.08%	0.1005	3.60%
132.99	Phenylalanine, Miscellaneous (%)	3	3	1.961	0.1599	1.961	0.1599	0.1131	8.15%	0.0700	3.61%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	1.805							
132.05	Phenylalanine, Pre-col AQC Der (%)	1	1	1.990							
133.00	Proline, Post-col Ninhydrin Der (%)	4	4	4.944	0.9800	4.944	0.9800	0.4900	19.82%	0.3486	3.14%
133.99	Proline, Miscellaneous (%)	3	3	4.224	0.3526	4.224	0.3526	0.2036	8.35%	0.0833	3.22%
133.05	Proline, Pre-col AQC Der (%)	1	1	3.700							
134.00	Serine, Post-col Ninhydrin Der (%)	4	4	2.055	0.2140	2.055	0.2140	0.1070	10.42%	0.0695	3.59%
134.99	Serine, Miscellaneous (%)	3	3	2.440	0.3599	2.440	0.3599	0.2078	14.75%	0.0863	3.50%
134.02	Serine, Post-col OPA Der (%)	1	1	2.040							
134.05	Serine, Pre-col AQC Der (%)	1	1	2.110							
135.00	Threonine, Post-col Ninhydrin Der (%)	4	4	1.790	0.1190	1.790	0.1190	0.0595	6.64%	0.0610	3.66%
135.99	Threonine, Miscellaneous (%)	3	3	2.087	0.2372	2.087	0.2372	0.1677	11.37%	0.0700	3.58%
135.02	Threonine, Post-col OPA Der (%)	1	1	1.725							
135.05	Threonine, Pre-col AQC Der (%)	1	1	1.895							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	4	3	0.4584	0.0616	0.4584	0.0616	0.0355	13.43%	0.0056	4.50%
136.99	Tryptophan, Miscellaneous (%)	2	2	0.8725	0.7955						
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	1	1	0.3864							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	3	3	1.372	0.1614	1.372	0.1614	0.0932	11.76%	0.0998	3.81%
137.99	Tyrosine, Miscellaneous (%)	3	3	1.358	0.0783	1.358	0.0783	0.0553	5.76%	0.0483	3.82%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	1.310							
137.05	Tyrosine, Pre-col AQC Der (%)	1	1	1.505							
138.00	Valine, Post-col Ninhydrin Der (%)	4	4	2.260	0.1831	2.260	0.1831	0.0916	8.10%	0.0924	3.54%
138.99	Valine, Miscellaneous (%)	3	3	2.287	0.2068	2.287	0.2068	0.1194	9.04%	0.0937	3.53%
138.02	Valine, Post-col OPA Der (%)	1	1	2.175							

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
138.05	Valine, Pre-col AQC Der (%)	1	1	2.405							
139.99	Taurine, Miscellaneous (%)	3	3	0.2040	0.0476	0.2040	0.0476	0.0275	23.32%	0.0053	5.08%
139.00	Taurine, Post-col Ninhydrin Der (%)	1	1	0.1800							
139.02	Taurine, Post-col OPA Der (%)	1	1	0.5000							
139.05	Taurine, Pre-col AQC Der (%)	1	1	0.1450							
160.99	Fructose, Miscellaneous (%)	1		0.1500							
162.99	Glucose, Miscellaneous (%)	1		0.1500							
163.99	Lactose, Miscellaneous (%)	1		0.1500							
164.99	Maltose, Miscellaneous (%)	1		0.1500							
165.99	Sucrose, Miscellaneous (%)	1		0.1500							
166.99	Raffinose, Miscellaneous (%)	1		0.0500							
167.99	Stachyose, Miscellaneous (%)	1		0.0500							
400.01	Water Activity, Aqualab chilled mirror (Units)	5	5	0.3944	0.0211	0.3944	0.0211	0.0094	5.35%	0.0023	
400.99	Water Activity, Miscellaneous (Units)	5	4	0.4073	0.0320	0.4073	0.0320	0.0184	7.85%	0.0100	
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	3	3	0.0144	0.0115	0.0144	0.0115	0.0066	79.42%	0.0009	22.00%
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	1		0.8900							
518.53	Cadmium, ICP-MS, Microwave (ppm)	3	3	0.0299	0.0018	0.0299	0.0018	0.0010	5.86%	0.0016	22.00%
518.41	Cadmium, ICP, Dry ash (ppm)	1	1	0.0575							
518.43	Cadmium, ICP, Microwave (ppm)	2	1	0.0372							
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	4	3	0.5480	0.0422	0.5480	0.0422	0.0244	7.71%	0.0140	17.51%
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	2	2	1.004	0.4936						
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	1	1	1.443							
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.3555	0.0220	0.3555	0.0220	0.0127	6.19%	0.0267	18.69%
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.3385							
526.43	Lead, ICP, Microwave (ppm)	1	1	0.2249							
529.99	Mercury, Miscellaneous (ppb)	2	1	2.826							
539.53	Nickel, ICP-MS, Microwave (ppm)	3	3	0.6708	0.0146	0.6708	0.0146	0.0084	2.17%	0.0351	16.99%
539.41	Nickel, ICP, Dry ash (ppm)	1	1	0.6662							
539.43	Nickel, ICP, Microwave (ppm)	1	1	0.5562							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	2	2	0.0195	0.0078						
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.2100							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	3.705							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	2	2	0.2913	0.0018						
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	4.825							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	2	2	0.5905	0.0488						
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	2	1	0.0090							
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (% (w/w))	1	1	0.0565							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w))	1		0.0000							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	1		0.0200							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w))	1		0.0100							

Method Code	Analyte and Method	Total # Labs Submitting	# Labs in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO ffp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (%)	1		0.0000							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (%) (w/w)	2	2	0.0250	0.0212						
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (%) (w/w)	2	2	0.7050	0.0636						
758.99	Total Saturated Fatty Acids, Miscellaneous (%) (w/w)	2	2	6.890	0.8273						
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (%) (w/w)	2	2	5.968	0.3288						
766.99	Total Polyunsaturated Fatty Acids, Miscellaneous (%) (w/w)	2	2	0.6400	0.2828						
770.99	Total Fat (equivalent to NLEA), Miscellaneous (%) (w/w)	1	1	13.66							
772.99	Total Fatty Acids, Miscellaneous (%) (w/w)	1	1	13.06							

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. Robust Assigned Values indicated in bold font.



Pet Food Ingredient Scheme

Pork Meal

Test Material Code # 202243

Method Precision Report

Methods Reported: 46

Labs Reporting: 81

Issue Date : 09/30/2022

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 (%)	34	30	4.424	0.1520	0.0926	0.0986	0.1353	2.09%	2.23%	3.06%	1.372
001.99	Loss on Drying, Miscellaneous (%)	11	10	4.193	0.3879	0.3863	0.0483	0.3894	9.21%	1.15%	9.29%	8.057
002.01	Protein, Crude, Auto Kjel-Foss (%)	6	6	54.68	0.9736	0.9468	0.3211	0.9998	1.73%	0.59%	1.83%	3.113
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	62	59	55.46	1.070	0.8158	0.6897	1.068	1.47%	1.24%	1.93%	1.549
003.10	Fat, Crude, Randall, Pet Ether (%)	8	8	14.80	0.6015	0.5458	0.3572	0.6523	3.69%	2.41%	4.41%	1.826
003.14	Fat, Crude, Ankom (%)	13	12	15.07	0.9055	0.2349	0.2438	0.3385	1.58%	1.64%	2.28%	1.389
004.00	Fiber, Crude, Asbestos Free (%)	8	7	1.925	0.6774	0.6703	0.1931	0.6976	36.42%	10.49%	37.91%	3.612
004.07	Fiber, Crude, ANKOM (%)	19	19	1.890	0.5099	0.4938	0.1798	0.5256	26.13%	9.51%	27.81%	2.923
005.00	Ash, 2h @ 600°C (%)	46	43	19.22	0.4605	0.3224	0.3981	0.5123	1.68%	2.07%	2.67%	1.287
005.05	Ash, 3h @ 550°C (%)	12	11	19.24	0.3975	0.3739	0.1998	0.4239	1.95%	1.04%	2.21%	2.121
005.99	Ash, Miscellaneous (%)	5	5	19.26	0.5825	0.4966	0.4305	0.6572	2.58%	2.24%	3.41%	1.527
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	9	7	4.695	2.994	1.667	0.3191	1.697	43.97%	8.42%	44.77%	5.319
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	5	5	30.67	6.599	6.586	0.5881	6.612	21.47%	1.92%	21.56%	11.24
011.01	Loss on Drying, HT, 135°C 2hr (%)	20	18	4.956	0.3942	0.2564	0.1133	0.2804	5.23%	2.31%	5.71%	2.474
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	11	10	15.54	1.320	0.5579	0.7424	0.9287	3.51%	4.68%	5.85%	1.251
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	22	20	16.77	0.3205	0.2766	0.2264	0.3575	1.65%	1.35%	2.13%	1.579
019.41	Calcium, ICP, Dry ash (%)	13	12	6.052	0.9264	0.3179	0.1526	0.3526	5.05%	2.43%	5.60%	2.310
019.43	Calcium, ICP, Microwave (%)	14	14	6.012	0.3978	0.3737	0.1928	0.4205	6.22%	3.21%	6.99%	2.181
019.44	Calcium, ICP, Dry ash (%)	19	18	6.177	0.2130	0.1615	0.1632	0.2296	2.62%	2.65%	3.73%	1.407
022.41	Copper, ICP, Dry ash (ppm)	5	5	31.93	4.985	4.586	2.762	5.354	14.37%	8.65%	16.77%	1.938
022.43	Copper, ICP, Microwave (ppm)	13	12	35.43	3.638	1.996	0.9592	2.214	5.77%	2.77%	6.40%	2.309
025.41	Iron, ICP, Dry ash (ppm)	8	8	334.5	38.38	35.47	20.71	41.07	10.60%	6.19%	12.28%	1.984
025.43	Iron, ICP, Microwave (ppm)	12	9	340.1	32.50	16.98	5.140	17.74	5.18%	1.57%	5.41%	3.452
027.41	Magnesium, ICP, Dry ash (%)	13	13	0.2061	0.0164	0.0158	0.0061	0.0170	7.68%	2.94%	8.23%	2.801
027.43	Magnesium, ICP, Microwave (%)	11	11	0.1923	0.0127	0.0115	0.0077	0.0138	6.00%	3.99%	7.20%	1.806
027.44	Magnesium, ICP, Dry ash (%)	18	17	0.2075	0.0103	0.0055	0.0049	0.0074	2.64%	2.32%	3.51%	1.515
028.41	Manganese, ICP, Dry ash (ppm)	16	16	20.70	1.678	1.645	0.4688	1.711	7.95%	2.26%	8.26%	3.649
028.43	Manganese, ICP, Microwave (ppm)	12	11	20.56	2.708	1.354	0.6802	1.515	6.81%	3.42%	7.62%	2.227
028.44	Manganese, ICP, Dry ash (ppm)	8	8	21.28	2.404	2.388	0.3978	2.421	11.22%	1.87%	11.38%	6.085
031.41	Phosphorus, ICP, Dry ash (%)	13	12	3.359	0.1884	0.1114	0.1233	0.1661	3.35%	3.71%	5.00%	1.348
031.42	Phosphorus, ICP, Open vessel (%)	5	5	3.170	0.4998	0.4919	0.1246	0.5075	15.52%	3.93%	16.01%	4.073
031.43	Phosphorus, ICP, Microwave (%)	14	14	3.345	0.1900	0.1664	0.1299	0.2111	4.97%	3.88%	6.31%	1.625
031.44	Phosphorus, ICP, Dry ash (%)	19	18	3.311	0.0859		0.0999			3.00%		
032.41	Potassium, ICP, Dry ash (%)	15	15	0.6551	0.0491	0.0463	0.0231	0.0518	7.07%	3.53%	7.90%	2.239
032.42	Potassium, ICP, Open vessel (%)	5	5	0.6347	0.0388	0.0354	0.0224	0.0419	5.57%	3.53%	6.60%	1.869
032.43	Potassium, ICP, Microwave (%)	13	13	0.6435	0.0288	0.0272	0.0135	0.0304	4.23%	2.10%	4.72%	2.252

Test Material Code # 202243

Issue Date : 09/30/2022

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
032.44	Potassium, ICP, Dry ash (%)	18	17	0.6876	0.0300	0.0234	0.0111	0.0259	3.38%	1.60%	3.74%	2.336
033.01	Salt as chloride, Poten Cl (%)	6	6	0.8231	0.0423	0.0419	0.0083	0.0427	5.09%	1.01%	5.19%	5.155
035.41	Sodium, ICP, Dry ash (%)	31	30	0.6387	0.0482	0.0472	0.0143	0.0493	7.38%	2.23%	7.72%	3.453
035.43	Sodium, ICP, Microwave (%)	13	12	0.5868	0.0170	0.0045	0.0148	0.0155	0.77%	2.50%	2.62%	1.046
036.43	Sulfur, ICP, Microwave (%)	10	8	0.4891	0.0598	0.0580	0.0123	0.0593	12.05%	2.56%	12.32%	4.808
037.41	Zinc, ICP, Dry ash (ppm)	6	5	139.7	7.196	7.686	0.8193	7.729	5.47%	0.58%	5.50%	9.434
037.43	Zinc, ICP, Microwave (ppm)	13	13	139.7	13.12	12.05	7.348	14.11	8.62%	5.26%	10.10%	1.920
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	5	5	0.4500	0.0786	0.0723	0.0434	0.0844	16.07%	9.65%	18.74%	1.943
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	5	5	0.8313	0.0849	0.0768	0.0512	0.0923	9.23%	6.16%	11.10%	1.801
400.01	Water Activity, Aqualab chilled mirror (Units)	5	5	0.3944	0.0211	0.0211	0.0019	0.0212	5.34%	0.49%	5.36%	10.97

Notes: Precision Calculations provided for methods with 5 or more labs contributing to calculations.