



AAFCO
Association of American Feed Control Officials



Pet Food Ingredient Scheme

Soybean Meal

Test Material Code # 202341

Method Summary Report

(Precision Report Follows)

Labs Reporting: 38

Methods Reported: 238

Issue Date : 03/31/2023

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 (%)	12	12	9.135	0.2534	9.135	0.2864	0.1034	3.14%	0.1456	2.87%
001.99	Loss on Drying, Miscellaneous (%)	4	4	8.333	0.9826	8.333	0.9826	0.4913	11.79%	0.0950	2.91%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	3	3	9.351	0.1030	9.351	0.1030	0.0594	1.10%	0.0563	2.86%
001.03	Loss on Drying, Low temp. methods (%)	1	1	9.160							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	33	32	48.77	0.7862	48.95	0.2687	0.0594	0.55%	0.2399	1.43%
002.01	Protein, Crude, Auto Kjell-Foss (%)	2	2	48.40	0.1443						
002.04	Protein, Crude, Copper Catalyst (%)	1	1	48.89							
002.05	Protein, Crude, Copper, Boric Acid (%)	1	1	46.78							
002.08	Protein, Crude, Cu/Ti (%)	1	1	48.82							
002.99	Protein, Crude, Miscellaneous (%)	1	1	47.26							
003.14	Fat, Crude, Ankom (%)	11	11	1.035	0.1063	1.034	0.0941	0.0355	9.10%	0.0657	3.98%
003.10	Fat, Crude, Randall, Pet Ether (%)	5	4	0.9801	0.2170	0.9801	0.2170	0.1253	22.14%	0.0840	4.01%
003.06	Fat, Crude, Pet Ether (%)	3	3	0.9617	0.2562	0.9617	0.2562	0.1479	26.65%	0.1233	4.02%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	3	3	1.234	0.2658	1.234	0.2658	0.1880	21.55%	0.1802	3.88%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	1	1	1.143							
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	0.6350							
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	1	1	0.7900							
003.12	Fat, Crude, Hexane Ext (%)	1	1	1.075							
003.99	Fat, Crude, Miscellaneous (%)	1	1	0.7250							
004.07	Fiber, Crude, ANKOM (%)	12	12	3.612	0.4473	3.647	0.4294	0.1549	11.77%	0.1868	3.29%
004.00	Fiber, Crude, Asbestos Free (%)	8	8	3.640	0.1312	3.640	0.1488	0.0657	4.09%	0.1446	3.29%
004.03	Fiber, Crude, Fritted Glass (%)	1	1	3.505							
004.06	Fiber, Crude, Fibertec (%)	1	1	3.895							
005.00	Ash, 2h @ 600°C (%)	25	23	6.383	0.2328	6.377	0.2487	0.0648	3.90%	0.1028	3.03%
005.05	Ash, 3h @ 550°C (%)	3	3	6.663	0.4939	6.663	0.4939	0.2851	7.41%	0.1177	3.01%
005.03	Ash, Microwave furnace (%)	1	1	6.050							
005.99	Ash, Miscellaneous (%)	1	1	6.285							
006.00	Total Sugars, As sucrose (%)	1	1	11.48							
006.99	Total Sugars, Miscellaneous (%)	1	1	9.780							

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007.00	Urease, Act pH Chng (%)	1	1	0.0150							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	7	6	5.061	0.6962	5.054	0.7737	0.3948	15.31%	0.1633	3.13%
008.02	Fiber, Acid Detergent, Crucible (%)	3	3	4.703	0.1587	4.703	0.1587	0.0916	3.37%	0.3137	3.17%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	7	7	8.228	1.172	7.994	0.7176	0.3391	8.98%	0.7093	2.93%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	2	2	7.681	0.1075						
010.03	Moisture, Karl-Fischer (%)	1	1	9.255							
010.99	Moisture, Miscellaneous (%)	1	1	8.955							
011.01	Loss on Drying, HT, 135°C 2hr (%)	16	14	9.729	0.4916	9.740	0.5218	0.1743	5.36%	0.0748	2.84%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	2	2	10.00	0.0849						
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	3	3	1.734	1.574	1.734	1.574	0.9085	90.73%	0.1613	3.68%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	2	2	0.8600	0.6223						
012.00	Starch, Polarimetric (Ewers) (%)	1	1	4.450							
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	1	1	0.8666							
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	0.6700							
013.02	Fat, Pretreat, Mojonier, Bak Ext, Acid hydrolysis (%)	8	8	2.952	0.5002	2.952	0.5673	0.2507	19.21%	0.2564	3.40%
013.00	Fat, Pretreat, Acid hydrolysis (%)	2	2	3.323	1.029						
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	1	1	1.200							
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	1	1	3.195							
014.01	Fiber, Total Dietary, Enz-Grav (%)	1	1	16.35							
015.43	Aluminum, ICP, Microwave (ppm)	2	2	14.51	16.99						
015.41	Aluminum, ICP, Dry ash (ppm)	1	1	24.57							
015.53	Aluminum, ICP-MS, Microwave (ppm)	1	1	26.13							
017.41	Boron, ICP, Dry ash (ppm)	2	2	37.46	3.370						
017.43	Boron, ICP, Microwave (ppm)	2	2	38.45	2.759						
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	30.85							
019.43	Calcium, ICP, Microwave (%)	12	12	0.3902	0.0307	0.3862	0.0236	0.0085	6.12%	0.0108	4.62%
019.41	Calcium, ICP, Dry ash (%)	5	5	0.3915	0.0229	0.3915	0.0229	0.0103	5.86%	0.0124	4.61%
019.31	Calcium, AAS, Dry ash (%)	3	3	0.3572	0.0112	0.3572	0.0112	0.0065	3.14%	0.0088	4.67%
019.42	Calcium, ICP, Open vessel (%)	3	3	0.3929	0.0253	0.3929	0.0253	0.0146	6.43%	0.0492	4.60%
019.53	Calcium, ICP-MS, Microwave (%)	2	2	0.3722	0.0252						
019.52	Calcium, ICP-MS, Open vessel (%)	1	1	0.5150							
021.41	Cobalt, ICP, Dry ash (ppm)	2	2	0.3558	0.1072						
021.43	Cobalt, ICP, Microwave (ppm)	2	2	0.3573	0.1164						
021.53	Cobalt, ICP-MS, Microwave (ppm)	2	1	0.2692							
021.31	Cobalt, AAS, Dry ash (ppm)	1		0.5000							
021.42	Cobalt, ICP, Open vessel (ppm)	1		1.000							
022.43	Copper, ICP, Microwave (ppm)	11	11	14.42	0.8312	14.42	0.9400	0.3543	6.52%	0.4121	10.71%
022.41	Copper, ICP, Dry ash (ppm)	5	4	14.97	1.309	14.97	1.309	0.6545	8.74%	0.1477	10.65%
022.42	Copper, ICP, Open vessel (ppm)	3	3	14.44	1.013	14.44	1.013	0.5846	7.01%	0.5350	10.70%
022.31	Copper, AAS, Dry ash (ppm)	1	1	16.57							

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022.33	Copper, AAS, Microwave (ppm)	1	1	15.10							
022.52	Copper, ICP-MS, Open vessel (ppm)	1	1	13.61							
022.53	Copper, ICP-MS, Microwave (ppm)	1	1	13.71							
025.43	Iron, ICP, Microwave (ppm)	10	10	108.1	10.84	107.5	10.76	4.255	10.02%	3.335	7.91%
025.41	Iron, ICP, Dry ash (ppm)	5	4	105.2	3.611	105.2	3.611	1.806	3.43%	1.293	7.94%
025.42	Iron, ICP, Open vessel (ppm)	3	3	99.03	5.610	99.03	5.610	3.239	5.66%	3.247	8.01%
025.31	Iron, AAS, Dry ash (ppm)	2	2	111.6	3.783						
025.53	Iron, ICP-MS, Microwave (ppm)	2	2	102.6	10.44						
025.52	Iron, ICP-MS, Open vessel (ppm)	1	1	95.68							
027.43	Magnesium, ICP, Microwave (%)	10	10	0.3040	0.0102	0.3033	0.0100	0.0039	3.28%	0.0094	4.79%
027.41	Magnesium, ICP, Dry ash (%)	5	5	0.3086	0.0127	0.3086	0.0127	0.0057	4.11%	0.0122	4.77%
027.31	Magnesium, AAS, Dry ash (%)	3	3	0.2902	0.0050	0.2902	0.0050	0.0029	1.71%	0.0076	4.82%
027.42	Magnesium, ICP, Open vessel (%)	3	3	0.3093	0.0223	0.3093	0.0223	0.0129	7.21%	0.0243	4.77%
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.3001	0.0282						
027.52	Magnesium, ICP-MS, Open vessel (%)	1	1	0.2985							
028.43	Manganese, ICP, Microwave (ppm)	11	11	53.31	3.394	53.30	3.849	1.451	7.22%	1.410	8.79%
028.41	Manganese, ICP, Dry ash (ppm)	5	5	54.39	3.549	54.39	3.549	1.587	6.53%	0.6525	8.77%
028.42	Manganese, ICP, Open vessel (ppm)	3	3	51.85	1.703	51.85	1.703	0.9833	3.28%	1.010	8.83%
028.31	Manganese, AAS, Dry ash (ppm)	2	2	53.65	0.2899						
028.53	Manganese, ICP-MS, Microwave (ppm)	2	2	51.77	3.154						
028.52	Manganese, ICP-MS, Open vessel (ppm)	1	1	49.79							
031.43	Phosphorus, ICP, Microwave (%)	13	13	0.7008	0.0333	0.7026	0.0335	0.0116	4.77%	0.0172	4.22%
031.41	Phosphorus, ICP, Dry ash (%)	5	5	0.6968	0.0186	0.6968	0.0186	0.0083	2.66%	0.0100	4.22%
031.42	Phosphorus, ICP, Open vessel (%)	4	3	0.6944	0.0353	0.6944	0.0353	0.0204	5.08%	0.0155	4.23%
031.01	Phosphorus, Photometric (%)	2	2	0.6742	0.0294						
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.6982	0.0450						
031.03	Phosphorus, Autoanalyzer (%)	1	1	0.7000							
032.43	Potassium, ICP, Microwave (%)	12	12	2.321	0.0783	2.329	0.0708	0.0255	3.04%	0.0565	3.52%
032.41	Potassium, ICP, Dry ash (%)	6	5	2.411	0.1568	2.411	0.1568	0.0877	6.50%	0.0254	3.50%
032.31	Potassium, AAS, Dry ash (%)	3	3	2.307	0.1001	2.307	0.1001	0.0578	4.34%	0.0201	3.53%
032.42	Potassium, ICP, Open vessel (%)	4	3	2.182	0.0350	2.182	0.0350	0.0202	1.60%	0.1300	3.56%
032.53	Potassium, ICP-MS, Microwave (%)	2	2	2.273	0.1090						
032.99	Potassium, Miscellaneous (%)	1	1	2.463							
033.01	Salt as chloride, Poten Cl (%)	6	3	0.0218	0.0072	0.0218	0.0072	0.0052		0.0000	7.11%
033.99	Salt, Miscellaneous (%)	1	1	0.0750							
033.00	Salt as chloride, Sol Cl (%)	1		0.1000							
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	3	2	0.3226	0.0883	0.3226	0.0883			0.0256	18.97%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	1	1	0.1920							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	1		10.00							
035.43	Sodium, ICP, Microwave (%)	8	7	0.0083	0.0068	0.0082	0.0076	0.0036	92.80%	0.0005	8.24%

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035.41	Sodium, ICP, Dry ash (%)	5	5	0.0113	0.0080	0.0113	0.0080	0.0036	70.34%	0.0016	7.85%
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.0022	0.0003						
035.42	Sodium, ICP, Open vessel (%)	2	1	0.0039							
036.43	Sulfur, ICP, Microwave (%)	7	7	0.4051	0.0173	0.4051	0.0196	0.0093	4.85%	0.0130	4.58%
036.42	Sulfur, ICP, Open vessel (%)	5	4	0.3836	0.0176	0.3836	0.0176	0.0102	4.59%	0.0094	4.62%
036.04	Sulfur, LECO (%)	1	1	0.4250							
037.43	Zinc, ICP, Microwave (ppm)	10	10	55.27	4.880	55.27	5.534	2.187	10.01%	1.747	8.75%
037.41	Zinc, ICP, Dry ash (ppm)	5	3	58.46	0.3651	58.46	0.3651	0.2108	0.62%	0.5067	8.67%
037.42	Zinc, ICP, Open vessel (ppm)	3	3	52.90	6.362	52.90	6.362	3.673	12.03%	0.5350	8.80%
037.31	Zinc, AAS, Dry ash (ppm)	2	2	54.09	2.263						
037.53	Zinc, ICP-MS, Microwave (ppm)	2	2	53.06	4.158						
037.33	Zinc, AAS, Microwave (ppm)	1	1	61.70							
037.52	Zinc, ICP-MS, Open vessel (ppm)	1	1	56.53							
038.41	Molybdenum, ICP, Dry ash (ppm)	3	3	1.980	0.1955	1.980	0.1955	0.1129	9.87%	0.0751	14.43%
038.43	Molybdenum, ICP, Microwave (ppm)	2	2	1.883	0.2583						
038.53	Molybdenum, ICP-MS, Microwave (ppm)	2	2	2.056	0.2742						
038.42	Molybdenum, ICP, Open vessel (ppm)	1	1	2.050							
038.51	Molybdenum, ICP-MS, Dry ash (ppm)	1	1	2.080							
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	12.93							
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	0.0773							
042.00	Chloride, Titrimetric (%)	1	1	0.0300							
101.02	Choline Chloride, LC (ppm)	1		0.0600							
102.01	Niacin, Microbiological (ppm)	1	1	24.55							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	11.20							
104.00	Riboflavin, Fluorometric (ppm)	1	1	2.020							
105.01	Thiamine, Fluorometer (ppm)	1	1	31.25							
107.00	Vitamin B12, Microbiological (ppb)	1		4.400							
109.02	Vitamin E, LC (IU / kg)	1	1	1.745							
112.01	Pyridoxine, LC (µg / g)	1	1	5.965							
113.01	Folic Acid, Micro (ppm)	1	1	2.765							
114.01	Biotin, Microbiological (ppm)	1	1	0.4150							
120.00	Alanine, Post-col Ninhydrin Der (%)	4	4	2.155	0.0380	2.155	0.0380	0.0190	1.76%	0.0127	3.56%
120.05	Alanine, Pre-col AQC Der (%)	1	1	1.899							
120.99	Alanine, Miscellaneous (%)	1	1	2.060							
121.00	Arginine, Post-col Ninhydrin Der (%)	4	4	3.469	0.0411	3.469	0.0411	0.0206	1.19%	0.0262	3.32%
121.05	Arginine, Pre-col AQC Der (%)	1	1	3.346							
121.99	Arginine, Miscellaneous (%)	1	1	3.010							
122.00	Aspartic, Post-col Ninhydrin Der (%)	4	4	5.620	0.0933	5.620	0.0933	0.0466	1.66%	0.0458	3.08%
122.05	Aspartic, Pre-col AQC Der (%)	1	1	4.119							
122.99	Aspartic, Miscellaneous (%)	1	1	4.205							

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124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	4	4	0.6990	0.0293	0.6990	0.0293	0.0146	4.19%	0.0090	4.22%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	1	1	0.6856							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.7200							
125.00	Glutamic, Post-col Ninhydrin Der (%)	4	4	9.175	0.2581	9.175	0.2581	0.1290	2.81%	0.0743	2.87%
125.05	Glutamic, Pre-col AQC Der (%)	1	1	7.697							
125.99	Glutamic, Miscellaneous (%)	1	1	6.915							
126.00	Glycine, Post-col Ninhydrin Der (%)	4	4	2.079	0.0350	2.079	0.0350	0.0175	1.68%	0.0110	3.58%
126.05	Glycine, Pre-col AQC Der (%)	1	1	2.146							
126.99	Glycine, Miscellaneous (%)	1	1	2.080							
127.00	Histidine, Post-col Ninhydrin Der (%)	4	4	1.327	0.0680	1.327	0.0680	0.0340	5.13%	0.0095	3.83%
127.05	Histidine, Pre-col AQC Der (%)	1	1	1.111							
127.99	Histidine, Miscellaneous (%)	1	1	1.205							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	4	4	2.272	0.1296	2.272	0.1296	0.0648	5.70%	0.0389	3.54%
128.05	Isoleucine, Pre-col AQC Der (%)	1	1	2.057							
128.99	Isoleucine, Miscellaneous (%)	1	1	1.940							
129.00	Leucine, Post-col Ninhydrin Der (%)	4	4	3.799	0.0389	3.799	0.0389	0.0194	1.02%	0.0268	3.27%
129.05	Leucine, Pre-col AQC Der (%)	1	1	3.181							
129.99	Leucine, Miscellaneous (%)	1	1	3.530							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	4	4	3.123	0.1275	3.123	0.1275	0.0638	4.08%	0.0567	3.37%
130.05	L-Lysine, Pre-col AQC Der (%)	1	1	2.475							
130.99	L-Lysine, Miscellaneous (%)	1	1	2.530							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	4	4	0.7161	0.0691	0.7161	0.0691	0.0346	9.65%	0.0225	4.21%
131.05	Methionine, PAO Pre-col AQC Der (%)	1	1	0.7452							
131.99	Methionine, Miscellaneous (%)	1	1	0.6630							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	4	4	2.504	0.0705	2.504	0.0705	0.0353	2.82%	0.0154	3.48%
132.05	Phenylalanine, Pre-col AQC Der (%)	1	1	2.329							
132.99	Phenylalanine, Miscellaneous (%)	1	1	2.685							
133.00	Proline, Post-col Ninhydrin Der (%)	4	4	2.485	0.0752	2.485	0.0752	0.0376	3.03%	0.0526	3.49%
133.05	Proline, Pre-col AQC Der (%)	1	1	2.173							
133.99	Proline, Miscellaneous (%)	1	1	2.190							
134.00	Serine, Post-col Ninhydrin Der (%)	4	4	2.418	0.2417	2.418	0.2417	0.1209	10.00%	0.0325	3.50%
134.05	Serine, Pre-col AQC Der (%)	1	1	1.609							
134.99	Serine, Miscellaneous (%)	1	1	2.405							
135.00	Threonine, Post-col Ninhydrin Der (%)	4	4	1.937	0.0769	1.937	0.0769	0.0384	3.97%	0.0160	3.62%
135.05	Threonine, Pre-col AQC Der (%)	1	1	1.308							
135.99	Threonine, Miscellaneous (%)	1	1	1.770							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	2	2	0.7371	0.0182						
136.99	Tryptophan, Miscellaneous (%)	2	2	0.6250	0.0566						
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	1	1	0.6316							
136.05	Tryptophan, Pre-col AQC Der (%)	1	1	0.6770							

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137.00	Tyrosine, Post-col Ninhydrin Der (%)	4	4	1.655	0.0873	1.655	0.0873	0.0437	5.28%	0.0196	3.71%
137.05	Tyrosine, Pre-col AQC Der (%)	1	1	1.523							
137.99	Tyrosine, Miscellaneous (%)	1	1	1.205							
138.00	Valine, Post-col Ninhydrin Der (%)	4	4	2.353	0.0907	2.353	0.0907	0.0454	3.86%	0.0333	3.52%
138.05	Valine, Pre-col AQC Der (%)	1	1	2.109							
138.99	Valine, Miscellaneous (%)	1	1	1.985							
139.00	Taurine, Post-col Ninhydrin Der (%)	1	1	0.1400							
139.05	Taurine, Pre-col AQC Der (%)	1	1	0.0100							
160.99	Fructose, Miscellaneous (%)	1	1	0.5450							
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	1	6.365							
166.99	Raffinose, Miscellaneous (%)	1	1	1.035							
167.99	Stachyose, Miscellaneous (%)	1	1	5.005							
400.01	Water Activity, Aqualab chilled mirror (Units)	3	3	0.5123	0.0030	0.5123	0.0030	0.0017	0.58%	0.0062	
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	3	3	0.0149	0.0013	0.0149	0.0013	0.0007	8.62%	0.0018	22.00%
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	1		0.8900							
518.53	Cadmium, ICP-MS, Microwave (ppm)	3	3	0.0526	0.0135	0.0526	0.0135	0.0095	25.65%	0.0161	22.00%
518.41	Cadmium, ICP, Dry ash (ppm)	2	2	0.0369	0.0045						
518.43	Cadmium, ICP, Microwave (ppm)	2	1	0.0396							
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	2	2	0.4218	0.0540						
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	2	2	0.4114	0.0475						
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	2	1	0.3174							
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.0213	0.0008	0.0213	0.0008	0.0004	3.56%	0.0015	22.00%
526.41	Lead, ICP, Dry ash (ppm)	2	2	0.0967	0.0944						
526.43	Lead, ICP, Microwave (ppm)	1	1	0.2115							
529.99	Mercury, Miscellaneous (ppb)	3	1								
539.53	Nickel, ICP-MS, Microwave (ppm)	2	2	3.160	0.3401						
539.41	Nickel, ICP, Dry ash (ppm)	1	1	3.022							
539.43	Nickel, ICP, Microwave (ppm)	1	1	3.456							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1		0.0050							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1		0.0050							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	0.3603							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1		0.0050							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.0839							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	0.2332							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	1.130							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.1486							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	1		0.0050							

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
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	1		0.0050							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w)	1		0.0050							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	1	1	0.0092							
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	1		0.0050							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (% (w/w)	1		0.0050							
748.99	Lignoceric Acid (24:0), Miscellaneous (% (w/w))	1	1	0.0063							
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (% (w/w)	1		0.0050							
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (% (w/w))	1		0.0050							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	1.970							

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.



AAFCO
Association of American Feed Control Officials



Pet Food Ingredient Scheme
Soybean Meal
Test Material Code # 202341

Method Precision Report

Methods Reported: 26
Labs Reporting: 38
Issue Date : 03/31/2023

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 (%)	12	12	9.135	0.2534	0.2398	0.1157	0.2663	2.63%	1.27%	2.92%	2.302
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	33	29	48.77	0.7862	0.4047	0.1850	0.4450	0.83%	0.38%	0.91%	2.406
003.14	Fat, Crude, Ankom (%)	11	10	1.035	0.1063	0.1082	0.0404	0.1155	10.47%	3.91%	11.18%	2.861
004.00	Fiber, Crude, Asbestos Free (%)	8	7	3.640	0.1312	0.1281	0.0853	0.1539	3.52%	2.34%	4.23%	1.805
004.07	Fiber, Crude, ANKOM (%)	12	12	3.612	0.4473	0.4325	0.1614	0.4617	11.98%	4.47%	12.78%	2.860
005.00	Ash, 2h @ 600°C (%)	25	22	6.383	0.2328	0.2211	0.0771	0.2342	3.46%	1.21%	3.66%	3.036
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	7	6	5.061	0.6962	0.6900	0.1304	0.7022	13.63%	2.58%	13.88%	5.385
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	7	6	8.228	1.172	0.3941	0.3313	0.5148	5.04%	4.24%	6.59%	1.554
011.01	Loss on Drying, HT, 135°C 2hr (%)	16	14	9.729	0.4916	0.4897	0.0605	0.4935	5.03%	0.62%	5.07%	8.163
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	8	7	2.952	0.5002	0.4093	0.1249	0.4280	13.36%	4.08%	13.97%	3.426
019.41	Calcium, ICP, Dry ash (%)	5	5	0.3915	0.0229	0.0220	0.0093	0.0239	5.61%	2.38%	6.09%	2.564
019.43	Calcium, ICP, Microwave (%)	12	11	0.3902	0.0307	0.0177	0.0072	0.0192	4.63%	1.89%	5.00%	2.652
022.43	Copper, ICP, Microwave (ppm)	11	11	14.42	0.8312	0.8019	0.3089	0.8594	5.56%	2.14%	5.96%	2.782
025.43	Iron, ICP, Microwave (ppm)	10	10	108.1	10.84	10.68	2.647	11.00	9.88%	2.45%	10.17%	4.155
027.41	Magnesium, ICP, Dry ash (%)	5	5	0.3086	0.0127	0.0114	0.0079	0.0139	3.69%	2.56%	4.49%	1.755
027.43	Magnesium, ICP, Microwave (%)	10	10	0.3040	0.0102	0.0090	0.0067	0.0113	2.97%	2.22%	3.71%	1.670
028.41	Manganese, ICP, Dry ash (ppm)	5	5	54.39	3.549	3.531	0.5083	3.567	6.49%	0.93%	6.56%	7.018
028.43	Manganese, ICP, Microwave (ppm)	11	11	53.31	3.394	3.305	1.094	3.481	6.20%	2.05%	6.53%	3.182
031.41	Phosphorus, ICP, Dry ash (%)	5	5	0.6968	0.0186	0.0175	0.0088	0.0196	2.51%	1.26%	2.81%	2.229
031.43	Phosphorus, ICP, Microwave (%)	13	13	0.7008	0.0333	0.0319	0.0136	0.0346	4.55%	1.94%	4.94%	2.551
032.41	Potassium, ICP, Dry ash (%)	6	5	2.411	0.1568	0.1562	0.0200	0.1574	6.48%	0.83%	6.53%	7.889
032.43	Potassium, ICP, Microwave (%)	12	11	2.321	0.0783	0.0446	0.0463	0.0642	1.91%	1.98%	2.75%	1.389
035.41	Sodium, ICP, Dry ash (%)	5	5	0.0113	0.0080	0.0080	0.0007	0.0080	70.21%	6.49%	70.51%	10.86
035.43	Sodium, ICP, Microwave (%)	8	7	0.0083	0.0068	0.0068	0.0004	0.0068	82.59%	4.82%	82.73%	17.18
036.43	Sulfur, ICP, Microwave (%)	7	7	0.4051	0.0173	0.0160	0.0093	0.0185	3.96%	2.29%	4.57%	1.995
037.43	Zinc, ICP, Microwave (ppm)	10	9	55.27	4.880	4.487	1.190	4.642	8.23%	2.18%	8.51%	3.901

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