



AAFCO
Association of American Feed Control Officials



Pet Food Ingredient Scheme

Soybean Meal

Test Material Code # 202544

Method Summary Report

(Precision Report Follows)

Labs Reporting: 93

Methods Reported: 221

Issue Date : 12/31/2025

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 (Rob R-bar)	Thompson Horwitz %RSD
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	49	48	9.466	0.2325	9.500	0.1724	0.0311	1.82%	0.1109	2.85%
001.99	Loss on Drying, Miscellaneous (%)	5	4	9.233	0.3311	9.233	0.3311	0.1656	3.59%	0.1350	2.86%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	1	1	9.600							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	80	79	47.59	0.8391	47.68	0.3319	0.0467	0.70%	0.2443	1.45%
002.01	Protein, Crude, Auto Kjeld-Foss (%)	6	6	46.79	0.4917	46.79	0.5576	0.2845	1.19%	0.3215	1.46%
002.04	Protein, Crude, Copper Catalyst (%)	2	2	46.64	0.5940						
002.05	Protein, Crude, Copper, Boric Acid (%)	1	1	47.27							
002.11	Protein, Crude, NIR (%)	1	1	42.80							
003.10	Fat, Crude, Randall, Pet Ether (%)	20	19	1.740	0.1444	1.761	0.0897	0.0257	5.09%	0.0693	3.67%
003.14	Fat, Crude, Ankom (%)	18	18	1.974	0.4242	1.922	0.2455	0.0723	12.77%	0.0994	3.63%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	15	15	1.801	0.4923	1.704	0.1743	0.0563	10.23%	0.0943	3.69%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	10	9	2.176	0.6234	2.176	0.7069	0.2945	32.48%	0.0395	3.56%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	3	3	1.857	0.1151	1.857	0.1151	0.0814	6.20%	0.2300	3.64%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	2	2	1.970	0.1556						
003.06	Fat, Crude, Pet Ether (%)	2	2	1.805	0.1061						
003.99	Fat, Crude, Miscellaneous (%)	2	2	2.288	0.1662						
003.11	Fat, Crude, NIR (%)	1	1	1.350							
003.12	Fat, Crude, Hexane Ext (%)	1	1	1.815							
004.07	Fiber, Crude, ANKOM (%)	26	26	4.004	0.4858	3.975	0.3749	0.0919	9.43%	0.1430	3.25%
004.00	Fiber, Crude, Asbestos Free (%)	4	4	3.453	0.5470	3.453	0.5470	0.2735	15.84%	0.1850	3.32%
004.06	Fiber, Crude, Fibertec (%)	2	2	3.738	0.3500						
004.03	Fiber, Crude, Fritted Glass (%)	1	1	4.413							
004.11	Fiber, Crude, NIR (%)	1	1	3.950							
005.00	Ash, 2h @ 600°C (%)	55	54	5.933	0.1797	5.928	0.1900	0.0323	3.21%	0.0879	3.06%
005.03	Ash, Microwave furnace (%)	8	8	6.091	0.2210	6.128	0.1523	0.0673	2.49%	0.1113	3.04%
005.05	Ash, 3h @ 550°C (%)	8	8	6.083	0.4870	5.967	0.2241	0.0990	3.76%	0.0868	3.06%
005.99	Ash, Miscellaneous (%)	4	4	5.899	0.2037	5.899	0.2037	0.1018	3.45%	0.0775	3.06%
005.11	Ash, NIR (%)	1	1	4.950							
006.00	Total Sugars, As sucrose (%)	1	1	10.78							

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008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	11	10	6.002	1.764	5.711	1.193	0.4717	20.89%	0.4591	3.08%
008.02	Fiber, Acid Detergent, Crucible (%)	3	3	5.498	0.6361	5.498	0.6361	0.3673	11.57%	0.4500	3.09%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	1	1	11.22							
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	8	8	9.642	3.618	8.755	1.586	0.7010	18.12%	0.3510	2.89%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	1	1	8.430							
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	1	1	8.650							
010.99	Moisture, Miscellaneous (%)	4	4	9.368	0.8267	9.368	0.8267	0.4134	8.82%	0.1280	2.86%
011.01	Loss on Drying, HT, 135°C 2hr (%)	21	20	9.913	0.3183	9.928	0.2983	0.0834	3.00%	0.1309	2.83%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	1	1	10.13							
012.00	Starch, Polarimetric (Ewers) (%)	2	2	4.825	1.662						
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	2	2	0.9732	0.0470						
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	1	1	0.9000							
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	10	9	3.619	0.4128	3.631	0.4389	0.1829	12.09%	0.1160	3.29%
013.00	Fat, Pretreat, Acid hydrolysis (%)	8	8	2.824	0.5340	2.958	0.2221	0.0982	7.51%	0.2829	3.40%
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	3	3	2.081	0.6076	2.081	0.6076	0.3508	29.19%	0.1413	3.58%
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	2	2	3.068	0.0177						
015.43	Aluminum, ICP, Microwave (ppm)	3	3	208.1	38.01	208.1	38.01	21.95	18.26%	31.79	7.16%
017.43	Boron, ICP, Microwave (ppm)	2	2	29.64	3.338						
019.44	Calcium, ICP, Dry ash (%)	29	28	0.2805	0.0079	0.2802	0.0080	0.0019	2.86%	0.0100	4.84%
019.43	Calcium, ICP, Microwave (%)	20	19	0.2830	0.0136	0.2816	0.0096	0.0027	3.40%	0.0080	4.84%
019.53	Calcium, ICP-MS, Microwave (%)	7	7	0.2809	0.0109	0.2809	0.0124	0.0059	4.41%	0.0150	4.84%
019.41	Calcium, ICP, Dry ash (%)	5	5	0.2822	0.0111	0.2822	0.0111	0.0049	3.92%	0.0145	4.84%
019.42	Calcium, ICP, Open vessel (%)	5	5	0.2643	0.0177	0.2643	0.0177	0.0079	6.68%	0.0098	4.89%
019.31	Calcium, AAS, Dry ash (%)	4	4	0.2687	0.0682	0.2687	0.0682	0.0341	25.38%	0.0058	4.87%
019.00	Calcium, Ox-Mn04 Vol. (%)	1	1	0.2600							
019.99	Calcium, Miscellaneous (%)	1	1	0.2700							
021.41	Cobalt, ICP, Dry ash (ppm)	2	2	0.3630	0.2588						
021.43	Cobalt, ICP, Microwave (ppm)	2	2	0.5134	0.0401						
022.44	Copper, ICP, Dry ash (ppm)	29	28	12.73	0.5764	12.73	0.5884	0.1390	4.62%	0.4023	10.91%
022.43	Copper, ICP, Microwave (ppm)	17	16	15.48	6.639	13.90	0.3440	0.1075	2.47%	0.3920	10.76%
022.41	Copper, ICP, Dry ash (ppm)	3	3	14.73	0.6972	14.73	0.6972	0.4025	4.73%	1.120	10.67%
022.42	Copper, ICP, Open vessel (ppm)	2	2	13.84	0.5070						
022.31	Copper, AAS, Dry ash (ppm)	1	1	15.45							
022.53	Copper, ICP-MS, Microwave (ppm)	1	1	14.95							
022.99	Copper, Miscellaneous (ppm)	1	1	13.00							
025.43	Iron, ICP, Microwave (ppm)	10	10	143.6	59.86	126.4	10.48	4.142	8.29%	4.688	7.72%
025.41	Iron, ICP, Dry ash (ppm)	4	4	130.0	8.380	130.0	8.380	4.190	6.44%	10.20	7.69%
025.42	Iron, ICP, Open vessel (ppm)	3	3	110.8	5.495	110.8	5.495	3.886	4.96%	4.625	7.88%
025.53	Iron, ICP-MS, Microwave (ppm)	2	2	130.0	7.071						
025.31	Iron, AAS, Dry ash (ppm)	1	1	134.1							

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025.99	Iron, Miscellaneous (ppm)	1	1	112.5							
027.44	Magnesium, ICP, Dry ash (%)	28	27	0.2570	0.0064	0.2562	0.0050	0.0012	1.94%	0.0073	4.91%
027.43	Magnesium, ICP, Microwave (%)	25	24	0.2550	0.0136	0.2544	0.0110	0.0028	4.33%	0.0061	4.91%
027.42	Magnesium, ICP, Open vessel (%)	5	5	0.2400	0.0176	0.2400	0.0176	0.0079	7.35%	0.0018	4.96%
027.41	Magnesium, ICP, Dry ash (%)	5	4	0.2643	0.0110	0.2643	0.0110	0.0055	4.17%	0.0040	4.89%
027.31	Magnesium, AAS, Dry ash (%)	3	3	0.2715	0.0162	0.2715	0.0162	0.0093	5.95%	0.0037	4.87%
027.53	Magnesium, ICP-MS, Microwave (%)	1	1	0.2805							
027.99	Magnesium, Miscellaneous (%)	1	1	0.2550							
028.44	Manganese, ICP, Dry ash (ppm)	27	26	30.66	0.5971	30.65	0.6039	0.1480	1.97%	0.6647	9.56%
028.43	Manganese, ICP, Microwave (ppm)	19	18	31.91	1.034	31.76	0.6988	0.2059	2.20%	0.4912	9.51%
028.41	Manganese, ICP, Dry ash (ppm)	5	5	31.10	2.026	31.10	2.026	0.9061	6.52%	0.7131	9.54%
028.42	Manganese, ICP, Open vessel (ppm)	3	3	30.79	1.012	30.79	1.012	0.5841	3.29%	0.5620	9.55%
028.53	Manganese, ICP-MS, Microwave (ppm)	3	3	45.01	19.40	45.01	19.40	11.20	43.10%	2.652	9.02%
028.31	Manganese, AAS, Dry ash (ppm)	1	1	34.85							
028.99	Manganese, Miscellaneous (ppm)	1	1	30.50							
031.44	Phosphorus, ICP, Dry ash (%)	29	28	0.5863	0.0148	0.5856	0.0142	0.0033	2.42%	0.0172	4.34%
031.43	Phosphorus, ICP, Microwave (%)	25	24	0.6231	0.0239	0.6189	0.0146	0.0037	2.36%	0.0123	4.30%
031.01	Phosphorus, Photometric (%)	5	5	0.6397	0.0388	0.6397	0.0388	0.0173	6.06%	0.0123	4.28%
031.41	Phosphorus, ICP, Dry ash (%)	5	5	0.6155	0.0357	0.6155	0.0357	0.0160	5.80%	0.0193	4.30%
031.42	Phosphorus, ICP, Open vessel (%)	5	5	0.5637	0.0447	0.5637	0.0447	0.0200	7.92%	0.0121	4.36%
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.6320	0.0042						
031.03	Phosphorus, Autoanalyzer (%)	1	1	0.5971							
031.99	Phosphorus, Miscellaneous (%)	1	1	0.5600							
032.44	Potassium, ICP, Dry ash (%)	28	28	2.155	0.0714	2.153	0.0574	0.0136	2.67%	0.0816	3.56%
032.43	Potassium, ICP, Microwave (%)	25	25	2.219	0.0968	2.213	0.0857	0.0214	3.87%	0.0579	3.55%
032.41	Potassium, ICP, Dry ash (%)	5	5	2.225	0.0540	2.225	0.0540	0.0241	2.43%	0.0625	3.55%
032.42	Potassium, ICP, Open vessel (%)	5	5	2.065	0.1701	2.065	0.1701	0.0761	8.24%	0.0461	3.59%
032.31	Potassium, AAS, Dry ash (%)	3	3	2.307	0.0908	2.307	0.0908	0.0642	3.94%		3.53%
032.53	Potassium, ICP-MS, Microwave (%)	2	2	27,476	38,853						
032.99	Potassium, Miscellaneous (%)	2	2	2.158	0.1319						
033.01	Salt as chloride, Poten Cl (%)	3	3	0.1160	0.0295	0.1160	0.0295				5.53%
033.99	Salt, Miscellaneous (%)	2	2	0.0875	0.0106						
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	2	2	0.6840	0.6824						
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	2	2	0.2220	0.0396						
034.51	Selenium, Total (Se), ICP-MS, Dry Ash (ppm)	1	1	0.2400							
035.41	Sodium, ICP, Dry ash (%)	32	31	0.0315	0.0043	0.0300	0.0000	0.0000	0.00%	0.0100	6.78%
035.43	Sodium, ICP, Microwave (%)	24	24	0.0268	0.0027	0.0269	0.0028	0.0007	10.42%	0.0011	6.89%
035.42	Sodium, ICP, Open vessel (%)	4	3	0.0305	0.0071	0.0305	0.0071	0.0041	23.20%	0.0010	6.76%
035.31	Sodium, AAS, Dry ash (%)	2	2	0.0478	0.0217						
035.53	Sodium, ICP-MS, Microwave (%)	2	2	300.9	425.5						

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035.99	Sodium, Miscellaneous (%)	1	1	0.0200							
036.43	Sulfur, ICP, Microwave (%)	5	5	0.3974	0.0330	0.3974	0.0330	0.0148	8.31%	0.0033	4.60%
036.42	Sulfur, ICP, Open vessel (%)	2	2	0.3665	0.0089						
036.04	Sulfur, LECO (%)	1	1	0.3725							
036.99	Sulfur, Miscellaneous (%)	1	1	0.3450							
037.44	Zinc, ICP, Dry ash (ppm)	24	24	47.01	2.616	46.60	1.509	0.3850	3.24%	0.9604	8.97%
037.43	Zinc, ICP, Microwave (ppm)	22	21	47.14	2.954	46.88	1.926	0.5254	4.11%	0.8872	8.96%
037.41	Zinc, ICP, Dry ash (ppm)	6	6	46.11	2.419	46.11	2.744	1.400	5.95%	1.655	8.99%
037.42	Zinc, ICP, Open vessel (ppm)	3	3	44.78	2.966	44.78	2.966	1.712	6.62%	1.153	9.03%
037.53	Zinc, ICP-MS, Microwave (ppm)	2	2	51.15	0.9192						
037.31	Zinc, AAS, Dry ash (ppm)	1	1	50.00							
037.99	Zinc, Miscellaneous (ppm)	1	1	43.50							
038.43	Molybdenum, ICP, Microwave (ppm)	2	2	7.758	0.6246						
038.53	Molybdenum, ICP-MS, Microwave (ppm)	2	2	8.870	0.8627						
038.41	Molybdenum, ICP, Dry ash (ppm)	1	1	7.600							
040.43	Barium, ICP, Microwave (ppm)	1	1	3.722							
042.00	Chloride, Titrimetric (%)	1	1	0.0692							
101.02	Choline Chloride, LC (ppm)	1	1	3,275							
102.01	Niacin, Microbiological (ppm)	1	1	32.25							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	11.35							
104.00	Riboflavin, Fluorometric (ppm)	1	1	2.545							
104.03	Riboflavin, LC (ppm)	1	1	3.900							
105.00	Thiamine, LC (ppm)	1	1	4.650							
105.01	Thiamine, Fluorometer (ppm)	1	1	6.450							
106.02	Vitamin A, LC (KU / kg)	2		0.3000							
108.99	Vitamin D3, Miscellaneous (KU / kg)	1		0.0520							
109.02	Vitamin E, LC (IU / kg)	2	2	15.99	17.69						
112.01	Pyridoxine, LC (µg / g)	1	1	6.115							
113.01	Folic Acid, Micro (ppm)	1	1	2.730							
114.99	Biotin, Miscellaneous (ppm)	1	1	0.1345							
120.00	Alanine, Post-col Ninhydrin Der (%)	3	3	2.058	0.0437	2.058	0.0437	0.0252	2.12%	0.0300	3.59%
120.05	Alanine, Pre-col AQC Der (%)	2	2	2.164	0.0202						
120.02	Alanine, Post-col OPA Der (%)	1	1	2.005							
120.99	Alanine, Miscellaneous (%)	1	1	2.280							
121.00	Arginine, Post-col Ninhydrin Der (%)	3	3	3.405	0.0904	3.405	0.0904	0.0522	2.66%	0.1150	3.33%
121.05	Arginine, Pre-col AQC Der (%)	2	2	3.355	0.0141						
121.02	Arginine, Post-col OPA Der (%)	1	1	3.345							
121.99	Arginine, Miscellaneous (%)	1	1	3.575							
122.00	Aspartic, Post-col Ninhydrin Der (%)	3	3	5.433	0.0988	5.433	0.0988	0.0570	1.82%	0.1200	3.10%
122.05	Aspartic, Pre-col AQC Der (%)	2	2	5.607	0.2447						

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122.02	Aspartic, Post-col OPA Der (%)	1	1	5.270							
122.99	Aspartic, Miscellaneous (%)	1	1	5.485							
124.00	Cysteine/Cystine, PAO Post-col Ninhydry Der (%)	3	3	0.6467	0.1087	0.6467	0.1087	0.0627	16.80%	0.0267	4.27%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	2	2	0.6050	0.1252						
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.6750							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	1.155							
125.00	Glutamic, Post-col Ninhydryn Der (%)	3	3	8.767	0.4062	8.767	0.4062	0.2345	4.63%	0.2467	2.88%
125.05	Glutamic, Pre-col AQC Der (%)	2	2	9.313	0.2581						
125.02	Glutamic, Post-col OPA Der (%)	1	1	8.410							
125.99	Glutamic, Miscellaneous (%)	1	1	9.340							
126.00	Glycine, Post-col Ninhydryn Der (%)	3	3	2.022	0.0465	2.022	0.0465	0.0268	2.30%	0.0300	3.60%
126.05	Glycine, Pre-col AQC Der (%)	2	2	2.034	0.0332						
126.02	Glycine, Post-col OPA Der (%)	1	1	1.955							
126.99	Glycine, Miscellaneous (%)	1	1	2.325							
127.00	Histidine, Post-col Ninhydryn Der (%)	3	3	1.250	0.0361	1.250	0.0361	0.0208	2.88%	0.0200	3.87%
127.05	Histidine, Pre-col AQC Der (%)	2	2	1.221	0.0513						
127.02	Histidine, Post-col OPA Der (%)	1	1	1.200							
127.99	Histidine, Miscellaneous (%)	1	1	1.280							
128.00	Isoleucine, Post-col Ninhydryn Der (%)	3	3	2.177	0.1861	2.177	0.1861	0.1074	8.55%	0.0533	3.56%
128.05	Isoleucine, Pre-col AQC Der (%)	2	2	2.258	0.0601						
128.02	Isoleucine, Post-col OPA Der (%)	1	1	1.935							
128.99	Isoleucine, Miscellaneous (%)	1	1	2.075							
129.00	Leucine, Post-col Ninhydryn Der (%)	3	3	3.657	0.1474	3.657	0.1474	0.0851	4.03%	0.0533	3.29%
129.05	Leucine, Pre-col AQC Der (%)	2	2	3.750	0.0276						
129.02	Leucine, Post-col OPA Der (%)	1	1	3.320							
129.99	Leucine, Miscellaneous (%)	1	1	3.810							
130.00	L-Lysine, Post-col Ninhydryn Der (%)	3	3	2.977	0.1434	2.977	0.1434	0.0828	4.82%	0.0467	3.39%
130.05	L-Lysine, Pre-col AQC Der (%)	2	2	3.142	0.0612						
130.02	L-Lysine, Post-col OPA Der (%)	1	1	2.875							
130.99	L-Lysine, Miscellaneous (%)	1	1	2.875							
131.00	Methionine, PAO Post-col Ninhydryn Der (%)	3	3	0.6617	0.0202	0.6617	0.0202	0.0143	3.05%		4.26%
131.05	Methionine, PAO Pre-col AQC Der (%)	2	2	0.7605	0.0834						
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.5900							
131.99	Methionine, Miscellaneous (%)	1	1	0.5300							
132.00	Phenylalanine, Post-col Ninhydryn Der (%)	3	3	2.415	0.1203	2.415	0.1203	0.0695	4.98%	0.0567	3.50%
132.05	Phenylalanine, Pre-col AQC Der (%)	2	2	2.464	0.0088						
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	2.315							
132.99	Phenylalanine, Miscellaneous (%)	1	1	2.755							
133.00	Proline, Post-col Ninhydryn Der (%)	3	3	2.457	0.0749	2.457	0.0749	0.0530	3.05%	0.0500	3.49%
133.05	Proline, Pre-col AQC Der (%)	2	2	2.478	0.0251						

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 (Rob R-bar)	Thompson Horwitz %RSD
133.99	Proline, Miscellaneous (%)	2	2	2.603	0.3005						
134.00	Serine, Post-col Ninhydrin Der (%)	3	3	2.332	0.2094	2.332	0.2094	0.1209	8.98%	0.1167	3.52%
134.05	Serine, Pre-col AQC Der (%)	2	2	2.512	0.0315						
134.02	Serine, Post-col OPA Der (%)	1	1	2.315							
134.99	Serine, Miscellaneous (%)	1	1	2.555							
135.00	Threonine, Post-col Ninhydrin Der (%)	3	3	1.885	0.0173	1.885	0.0173	0.0122	0.92%	0.0500	3.64%
135.05	Threonine, Pre-col AQC Der (%)	2	2	1.930	0.0629						
135.02	Threonine, Post-col OPA Der (%)	1	1	1.790							
135.99	Threonine, Miscellaneous (%)	1	1	1.935							
136.99	Tryptophan, Miscellaneous (%)	2	2	0.5600	0.0990						
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	1	1	0.7150							
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.5050							
136.05	Tryptophan, Pre-col AQC Der (%)	1	1	0.8640							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	3	3	1.523	0.3139	1.523	0.3139	0.1812	20.60%	0.0467	3.75%
137.05	Tyrosine, Pre-col AQC Der (%)	2	2	1.579	0.1216						
137.02	Tyrosine, Post-col OPA Der (%)	1	1	1.535							
137.99	Tyrosine, Miscellaneous (%)	1	1	1.515							
138.00	Valine, Post-col Ninhydrin Der (%)	3	3	2.248	0.1991	2.248	0.1991	0.1150	8.86%	0.0433	3.54%
138.05	Valine, Pre-col AQC Der (%)	2	2	2.318	0.0951						
138.02	Valine, Post-col OPA Der (%)	1	1	2.165							
138.99	Valine, Miscellaneous (%)	1	1	2.130							
139.00	Taurine, Post-col Ninhydrin Der (%)	2	1	0.1900							
400.01	Water Activity, Aqualab chilled mirror (Units)	1	1	0.5425							
400.99	Water Activity, Miscellaneous (Units)	1	1	0.5265							
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	2	2	0.0388	0.0018						
518.53	Cadmium, ICP-MS, Microwave (ppm)	2	2	0.0683	0.0018						
518.43	Cadmium, ICP, Microwave (ppm)	1	1	0.0729							
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	2	2	1.195	0.0283						
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	2	2	1.427	0.2005						
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.0751	0.0038	0.0751	0.0038	0.0027	5.03%	0.0039	22.00%
529.99	Mercury, Miscellaneous (ppb)	1		0.0050							
539.53	Nickel, ICP-MS, Microwave (ppm)	1	1	4.180							

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 # 202544

Method Precision Report

Methods Reported: 45

Labs Reporting: 93

Issue Date : 12/31/2025

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 (%)	49	43	9.466	0.2325	0.1660	0.0847	0.1864	1.75%	0.89%	1.96%	2.200
002.01	Protein, Crude, Auto Kjel-Foss (%)	6	6	46.79	0.4917	0.4607	0.2430	0.5208	0.98%	0.52%	1.11%	2.144
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	80	75	47.59	0.8391	0.3282	0.2422	0.4078	0.69%	0.51%	0.86%	1.684
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	15	14	1.801	0.4923	0.1408	0.0800	0.1620	8.39%	4.76%	9.64%	2.024
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	10	9	2.176	0.6234	0.6230	0.0315	0.6238	28.63%	1.45%	28.66%	19.77
003.10	Fat, Crude, Randall, Pet Ether (%)	20	18	1.740	0.1444	0.1086	0.0517	0.1203	6.17%	2.93%	6.83%	2.328
003.14	Fat, Crude, Ankom (%)	18	16	1.974	0.4242	0.2343	0.0765	0.2465	12.28%	4.01%	12.91%	3.220
004.07	Fiber, Crude, ANKOM (%)	26	24	4.004	0.4858	0.3331	0.1322	0.3583	8.43%	3.35%	9.07%	2.710
005.00	Ash, 2h @ 600°C (%)	55	51	5.933	0.1797	0.1600	0.0806	0.1791	2.70%	1.36%	3.02%	2.223
005.03	Ash, Microwave furnace (%)	8	7	6.091	0.2210	0.0843	0.0893	0.1229	1.37%	1.45%	1.99%	1.375
005.05	Ash, 3h @ 550°C (%)	8	6	6.083	0.4870	0.1390	0.0613	0.1519	2.36%	1.04%	2.58%	2.480
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	11	9	6.002	1.764	0.8459	0.4128	0.9412	15.35%	7.49%	17.07%	2.280
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	8	6	9.642	3.618	1.158	0.2129	1.177	13.92%	2.56%	14.15%	5.529
011.01	Loss on Drying, HT, 135°C 2hr (%)	21	19	9.913	0.3183	0.3092	0.1106	0.3284	3.11%	1.11%	3.31%	2.969
013.00	Fat, Pretreat, Acid hydrolysis (%)	8	7	2.824	0.5340	0.0710	0.1928	0.2054	2.36%	6.41%	6.83%	1.066
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	10	9	3.619	0.4128	0.4057	0.1079	0.4198	11.21%	2.98%	11.60%	3.892
019.41	Calcium, ICP, Dry ash (%)	5	5	0.2822	0.0111	0.0083	0.0103	0.0132	2.95%	3.65%	4.69%	1.286
019.42	Calcium, ICP, Open vessel (%)	5	5	0.2643	0.0177	0.0172	0.0060	0.0182	6.49%	2.27%	6.87%	3.033
019.43	Calcium, ICP, Microwave (%)	20	17	0.2830	0.0136	0.0082	0.0060	0.0101	2.91%	2.13%	3.61%	1.695
019.44	Calcium, ICP, Dry ash (%)	29	27	0.2805	0.0079	0.0045	0.0076	0.0088	1.61%	2.71%	3.15%	1.163
019.53	Calcium, ICP-MS, Microwave (%)	7	6	0.2809	0.0109	0.0089	0.0041	0.0097	3.18%	1.47%	3.50%	2.387
022.43	Copper, ICP, Microwave (ppm)	17	15	15.48	6.639	0.3743	0.2916	0.4745	2.71%	2.11%	3.43%	1.627
022.44	Copper, ICP, Dry ash (ppm)	29	28	12.73	0.5764	0.5055	0.3916	0.6395	3.97%	3.08%	5.02%	1.633
025.43	Iron, ICP, Microwave (ppm)	10	9	143.6	59.86	7.881	3.567	8.650	6.31%	2.86%	6.93%	2.425
027.42	Magnesium, ICP, Open vessel (%)	5	5	0.2400	0.0176	0.0176	0.0011	0.0176	7.34%	0.45%	7.35%	16.34
027.43	Magnesium, ICP, Microwave (%)	25	22	0.2550	0.0136	0.0104	0.0053	0.0117	4.12%	2.11%	4.63%	2.197
027.44	Magnesium, ICP, Dry ash (%)	28	25	0.2570	0.0064		0.0063			2.45%		
028.41	Manganese, ICP, Dry ash (ppm)	5	5	31.10	2.026	1.988	0.5545	2.064	6.39%	1.78%	6.64%	3.722

Test Material Code # 202544
Issue Date : 12/31/2025

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
028.43	Manganese, ICP, Microwave (ppm)	19	17	31.91	1.034	0.5143	0.4730	0.6987	1.62%	1.49%	2.20%	1.477
028.44	Manganese, ICP, Dry ash (ppm)	27	26	30.66	0.5971	0.3658	0.6674	0.7611	1.19%	2.18%	2.48%	1.140
031.01	Phosphorus, Photometric (%)	5	5	0.6397	0.0388	0.0386	0.0056	0.0390	6.03%	0.87%	6.09%	6.966
031.41	Phosphorus, ICP, Dry ash (%)	5	5	0.6155	0.0357	0.0337	0.0167	0.0376	5.47%	2.71%	6.11%	2.253
031.42	Phosphorus, ICP, Open vessel (%)	5	5	0.5637	0.0447	0.0441	0.0100	0.0452	7.82%	1.78%	8.02%	4.511
031.43	Phosphorus, ICP, Microwave (%)	25	22	0.6231	0.0239	0.0114	0.0101	0.0152	1.84%	1.64%	2.47%	1.504
031.44	Phosphorus, ICP, Dry ash (%)	29	25	0.5863	0.0148	0.0092	0.0109	0.0142	1.57%	1.85%	2.43%	1.309
032.41	Potassium, ICP, Dry ash (%)	5	5	2.225	0.0540	0.0454	0.0414	0.0614	2.04%	1.86%	2.76%	1.484
032.42	Potassium, ICP, Open vessel (%)	5	5	2.065	0.1701	0.1678	0.0395	0.1724	8.13%	1.91%	8.35%	4.360
032.43	Potassium, ICP, Microwave (%)	25	24	2.219	0.0968	0.0679	0.0454	0.0816	3.08%	2.06%	3.70%	1.799
032.44	Potassium, ICP, Dry ash (%)	28	27	2.155	0.0714	0.0410	0.0624	0.0746	1.91%	2.90%	3.47%	1.196
035.41	Sodium, ICP, Dry ash (%)	32	27	0.0315	0.0043	0.0033	0.0007	0.0034	10.48%	2.17%	10.70%	4.941
035.43	Sodium, ICP, Microwave (%)	24	23	0.0268	0.0027	0.0023	0.0007	0.0024	8.56%	2.61%	8.95%	3.431
036.43	Sulfur, ICP, Microwave (%)	5	5	0.3974	0.0330	0.0330	0.0028	0.0331	8.29%	0.70%	8.32%	11.94
037.41	Zinc, ICP, Dry ash (ppm)	6	6	46.11	2.419	2.165	1.528	2.650	4.69%	3.31%	5.75%	1.734
037.43	Zinc, ICP, Microwave (ppm)	22	20	47.14	2.954	1.731	0.7987	1.906	3.71%	1.71%	4.09%	2.387
037.44	Zinc, ICP, Dry ash (ppm)	24	22	47.01	2.616	0.9051	1.097	1.422	1.95%	2.36%	3.07%	1.296

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