



AAFCO
Association of American Feed Control Officials



Animal Feed Scheme

Dry Cat Food

Test Material Code # 202526

Method Summary Report

(Precision Report Follows)

Labs Reporting: 202

Methods Reported: 343

Issue Date : 07/31/2025

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 (%)	84	81	5.288	0.6103	5.224	0.1523	0.0212	2.92%	0.0890	3.12%
001.99	Loss on Drying, Miscellaneous (%)	19	19	5.108	0.8853	5.044	0.6970	0.1999	13.82%	0.1251	3.14%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	6	6	5.167	0.2016	5.188	0.1773	0.0905	3.42%	0.0621	3.12%
001.03	Loss on Drying, Low temp. methods (%)	3	3	5.168	0.0493	5.168	0.0493	0.0285	0.95%	0.0700	3.12%
001.05	Loss on Drying, LECO (%)	1	1	5.305							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	153	152	30.66	1.095	30.74	0.2539	0.0257	0.83%	0.1969	1.80%
002.05	Protein, Crude, Copper, Boric Acid (%)	15	15	30.33	0.2427	30.32	0.2489	0.0803	0.82%	0.1244	1.82%
002.01	Protein, Crude, Auto Kjell-Foss (%)	14	12	30.38	0.2697	30.39	0.2865	0.1034	0.94%	0.1553	1.81%
002.11	Protein, Crude, NIR (%)	6	6	29.56	1.235	29.56	1.400	0.7144	4.74%	0.1522	1.84%
002.04	Protein, Crude, Copper Catalyst (%)	3	3	30.16	0.3717	30.16	0.3717	0.2146	1.23%	0.1733	1.82%
002.00	Protein, Crude, Crude (%)	2	2	29.90	0.3536						
002.08	Protein, Crude, Cu/Ti (%)	2	2	30.28	0.0983						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	1	1	30.43							
002.99	Protein, Crude, Miscellaneous (%)	1	1	30.75							
003.14	Fat, Crude, Ankom (%)	42	41	6.158	0.4675	6.218	0.2572	0.0502	4.14%	0.1093	3.04%
003.10	Fat, Crude, Randall, Pet Ether (%)	26	25	6.145	0.2212	6.123	0.1628	0.0407	2.66%	0.1165	3.05%
003.06	Fat, Crude, Pet Ether (%)	17	16	6.181	0.1775	6.173	0.1647	0.0515	2.67%	0.1159	3.04%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	8	6.607	1.156	6.279	0.3412	0.1508	5.43%	0.0657	3.03%
003.11	Fat, Crude, NIR (%)	6	6	8.083	1.445	8.083	1.638	0.8361	20.27%	0.0659	2.92%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	4	4	6.096	0.1572	6.096	0.1572	0.0786	2.58%	0.0775	3.05%
003.99	Fat, Crude, Miscellaneous (%)	5	4	6.809	1.368	6.809	1.368	0.9675	20.10%	0.0633	3.00%
003.12	Fat, Crude, Hexane Ext (%)	3	3	6.213	0.1451	6.213	0.1451	0.0838	2.34%	0.1533	3.04%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	3	3	6.238	0.3914	6.238	0.3914	0.2259	6.27%	0.0833	3.04%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	2	2	6.462	0.1444						
004.07	Fiber, Crude, ANKOM (%)	72	70	3.082	0.6391	3.009	0.4246	0.0634	14.11%	0.1469	3.39%
004.06	Fiber, Crude, Fibertec (%)	14	14	3.298	0.3961	3.289	0.4313	0.1441	13.11%	0.0952	3.34%
004.00	Fiber, Crude, Asbestos Free (%)	12	12	3.032	0.8617	2.914	0.6475	0.2336	22.22%	0.1614	3.41%
004.11	Fiber, Crude, NIR (%)	4	4	3.676	1.914	3.676	1.914	0.9571	52.07%	0.0767	3.29%
004.03	Fiber, Crude, Fritted Glass (%)	2	2	3.320	0.1626						

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004.99	Fiber, Crude, Miscellaneous (%)	2	2	3.122	0.2383						
005.00	Ash, 2h @ 600°C (%)	110	109	5.745	0.5888	5.652	0.1019	0.0122	1.80%	0.0707	3.08%
005.05	Ash, 3h @ 550°C (%)	35	33	5.652	0.0720	5.658	0.0554	0.0121	0.98%	0.0309	3.08%
005.99	Ash, Miscellaneous (%)	9	9	5.633	0.1934	5.615	0.1752	0.0730	3.12%	0.0550	3.08%
005.03	Ash, Microwave furnace (%)	8	7	5.868	0.0471	5.860	0.0334	0.0158	0.57%	0.0643	3.07%
005.11	Ash, NIR (%)	2	2	6.080	1.598						
005.02	Ash, LECO (%)	1	1	5.778							
006.99	Total Sugars, Miscellaneous (%)	2	2	2.588	1.361						
006.00	Total Sugars, As sucrose (%)	1	1	4.348							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	42	41	6.441	2.000	6.135	1.327	0.2591	21.63%	0.2187	3.04%
008.02	Fiber, Acid Detergent, Crucible (%)	9	9	6.534	1.433	6.479	1.500	0.6249	23.15%	0.1876	3.02%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	1	1	5.730							
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	39	38	17.00	3.499	16.34	1.991	0.4037	12.19%	0.3952	2.47%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	7	6	15.30	1.691	15.46	1.525	0.7783	9.87%	0.2451	2.54%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	1	1	14.80							
010.99	Moisture, Miscellaneous (%)	13	12	5.301	0.9379	5.274	0.4297	0.1550	8.15%	0.1186	3.11%
010.11	Moisture, NIR (%)	3	3	5.605	0.7232	5.605	0.7232	0.5114	12.90%	0.0450	3.09%
010.03	Moisture, Karl-Fischer (%)	1	1	6.340							
011.01	Loss on Drying, HT, 135°C 2hr (%)	62	61	5.701	0.3115	5.711	0.2465	0.0394	4.32%	0.0817	3.08%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	6	5	5.803	0.1507	5.803	0.1507	0.0843	2.60%	0.0520	3.07%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	1	1	5.255							
012.00	Starch, Polarimetric (Ewers) (%)	14	13	33.27	0.7557	33.26	0.6610	0.2291	1.99%	0.1933	1.73%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	8	8	31.36	1.129	31.31	1.169	0.5168	3.73%	0.8421	1.79%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	7	7	27.01	8.212	29.62	1.867	0.8821	6.30%	0.6859	1.84%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	29.36	1.431						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	30.78							
012.99	Starch, Miscellaneous (%)	1	1	32.23							
013.02	Fat, Pretreat, Mojonniier, Bak Ext, Acid hydrolysis (%)	54	53	9.433	0.3920	9.453	0.3142	0.0540	3.32%	0.1563	2.85%
013.00	Fat, Pretreat, Acid hydrolysis (%)	31	31	9.001	0.6592	9.064	0.4674	0.1049	5.16%	0.1477	2.87%
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	20	20	8.593	1.276	8.795	0.7203	0.2013	8.19%	0.2353	2.88%
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	8	8	8.793	0.3714	8.811	0.3774	0.1668	4.28%	0.2184	2.88%
013.08	Fat, Pretreat, Roese-Gottlieb Modified, Alkaline Hydrolysis (%)	1	1	6.165							
013.99	Fat, Pretreat, Miscellaneous (%)	1	1	9.990							
014.01	Fiber, Total Dietary, Enz-Grav (%)	1	1	14.31							
014.99	Fiber, Total Dietary, Miscellaneous (%)	1	1	13.90							
015.43	Aluminum, ICP, Microwave (ppm)	7	7	45.32	9.645	45.32	10.94	5.168	24.13%	1.678	9.01%
015.41	Aluminum, ICP, Dry ash (ppm)	3	3	65.71	29.24	65.71	29.24	16.88	44.50%	12.03	8.52%
015.53	Aluminum, ICP-MS, Microwave (ppm)	3	3	46.49	2.134	46.49	2.134	1.232	4.59%	2.687	8.98%
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	25.43	0.8132						
015.99	Aluminum, Miscellaneous (ppm)	1	1	31.70							

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017.42	Boron, ICP, Open vessel (ppm)	4	4	6.300	0.9087	6.300	0.9087	0.4543	14.42%	0.9260	12.13%
017.43	Boron, ICP, Microwave (ppm)	6	4	6.132	0.2529	6.132	0.2529	0.1581	4.12%	0.1045	12.18%
017.41	Boron, ICP, Dry ash (ppm)	5	3	5.696	0.2860	5.696	0.2860	0.1651	5.02%	0.1799	12.31%
017.53	Boron, ICP-MS, Microwave (ppm)	2	2	7.674	1.034						
017.99	Boron, Miscellaneous (ppm)	1	1	6.900							
019.43	Calcium, ICP, Microwave (%)	38	37	0.7059	0.0464	0.7000	0.0280	0.0057	4.00%	0.0244	4.22%
019.44	Calcium, ICP, Dry ash (%)	28	27	0.6778	0.0241	0.6789	0.0214	0.0051	3.15%	0.0211	4.24%
019.42	Calcium, ICP, Open vessel (%)	21	20	0.7134	0.0605	0.7110	0.0564	0.0158	7.94%	0.0192	4.21%
019.41	Calcium, ICP, Dry ash (%)	18	17	0.6889	0.0298	0.6895	0.0323	0.0098	4.69%	0.0200	4.23%
019.31	Calcium, AAS, Dry ash (%)	13	13	0.7036	0.0405	0.7072	0.0369	0.0128	5.21%	0.0281	4.21%
019.53	Calcium, ICP-MS, Microwave (%)	9	9	0.6722	0.0455	0.6710	0.0490	0.0204	7.30%	0.0147	4.25%
019.99	Calcium, Miscellaneous (%)	8	8	0.6238	0.0593	0.6237	0.0672	0.0297	10.77%	0.0133	4.29%
019.00	Calcium, Ox-Mn04 Vol. (%)	6	5	1.126	0.9419	1.126	0.9419	0.0506	83.65%	0.0300	3.93%
019.08	Calcium, EDTA (%)	5	5	0.7031	0.1122	0.7031	0.1122	0.0502	15.96%	0.0188	4.22%
019.52	Calcium, ICP-MS, Open vessel (%)	3	3	0.6881	0.1039	0.6881	0.1039	0.0600	15.10%	0.0320	4.23%
019.02	Calcium, Hach Method (%)	1	1	0.9900							
019.09	Calcium, Ion-selective electrode (%)	1	1	0.6210							
019.32	Calcium, AAS, Open vessel (%)	1	1	0.7100							
019.51	Calcium, ICP-MS, Dry ash (%)	1	1	0.6750							
021.53	Cobalt, ICP-MS, Microwave (ppm)	6	6	0.2170	0.0229	0.2170	0.0259	0.0132	11.96%	0.0294	20.13%
021.42	Cobalt, ICP, Open vessel (ppm)	3	3	0.3982	0.2598	0.3982	0.2598	0.1500	65.26%	0.1470	18.37%
021.43	Cobalt, ICP, Microwave (ppm)	7	3	0.3602	0.1445	0.3602	0.1445	0.1042	40.10%	0.0740	18.65%
021.41	Cobalt, ICP, Dry ash (ppm)	2	2	1.096	0.7912						
021.31	Cobalt, AAS, Dry ash (ppm)	1	1	0.2215							
021.52	Cobalt, ICP-MS, Open vessel (ppm)	3	1								
022.43	Copper, ICP, Microwave (ppm)	39	38	16.50	1.494	16.33	1.165	0.2363	7.13%	0.5466	10.51%
022.44	Copper, ICP, Dry ash (ppm)	27	26	15.40	0.9127	15.45	0.8242	0.2020	5.33%	0.4607	10.59%
022.42	Copper, ICP, Open vessel (ppm)	20	19	16.28	1.069	16.26	1.149	0.3296	7.07%	0.5140	10.51%
022.41	Copper, ICP, Dry ash (ppm)	14	13	16.04	3.908	15.96	2.280	0.7904	14.29%	0.8772	10.54%
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	15.80	0.4654	15.80	0.4654	0.2081	2.95%	0.4519	10.56%
022.31	Copper, AAS, Dry ash (ppm)	5	4	15.71	2.452	15.71	2.452	1.226	15.61%	0.3633	10.57%
022.99	Copper, Miscellaneous (ppm)	4	4	16.46	3.754	16.46	3.754	1.877	22.80%	1.427	10.49%
022.52	Copper, ICP-MS, Open vessel (ppm)	2	2	17.38	2.864						
025.43	Iron, ICP, Microwave (ppm)	27	26	185.8	13.16	185.2	10.73	2.631	5.79%	4.797	7.29%
025.42	Iron, ICP, Open vessel (ppm)	20	19	177.7	19.18	177.9	10.70	3.068	6.01%	6.845	7.33%
025.41	Iron, ICP, Dry ash (ppm)	13	12	167.2	18.70	170.3	12.32	4.445	7.24%	7.271	7.38%
025.53	Iron, ICP-MS, Microwave (ppm)	6	6	180.8	14.47	180.8	16.41	8.375	9.08%	11.31	7.32%
025.31	Iron, AAS, Dry ash (ppm)	5	4	177.2	4.951	177.2	4.951	2.476	2.79%	2.615	7.34%
025.99	Iron, Miscellaneous (ppm)	4	4	165.4	13.03	165.4	13.03	6.517	7.88%	3.953	7.42%
025.52	Iron, ICP-MS, Open vessel (ppm)	2	2	178.7	40.93						

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027.43	Magnesium, ICP, Microwave (%)	33	32	0.1744	0.0349	0.1671	0.0101	0.0022	6.01%	0.0051	5.24%
027.44	Magnesium, ICP, Dry ash (%)	27	26	0.1606	0.0059	0.1604	0.0055	0.0014	3.43%	0.0032	5.27%
027.42	Magnesium, ICP, Open vessel (%)	20	20	0.1672	0.0115	0.1670	0.0123	0.0034	7.39%	0.0059	5.24%
027.41	Magnesium, ICP, Dry ash (%)	12	12	0.1740	0.0404	0.1644	0.0090	0.0033	5.50%	0.0085	5.25%
027.31	Magnesium, AAS, Dry ash (%)	5	4	0.1582	0.0056	0.1582	0.0056	0.0033	3.56%		5.28%
027.53	Magnesium, ICP-MS, Microwave (%)	4	4	0.1644	0.0053	0.1644	0.0053	0.0026	3.20%	0.0073	5.25%
027.99	Magnesium, Miscellaneous (%)	3	3	0.1650	0.0087	0.1650	0.0087	0.0061	5.25%		5.25%
027.52	Magnesium, ICP-MS, Open vessel (%)	2	2	0.1574	0.0058						
028.43	Manganese, ICP, Microwave (ppm)	36	36	41.21	2.035	41.32	1.815	0.3782	4.39%	1.074	9.14%
028.44	Manganese, ICP, Dry ash (ppm)	27	26	40.19	1.200	40.18	1.037	0.2542	2.58%	1.168	9.18%
028.42	Manganese, ICP, Open vessel (ppm)	22	22	41.03	3.066	40.99	3.287	0.8759	8.02%	1.540	9.15%
028.41	Manganese, ICP, Dry ash (ppm)	13	12	44.69	12.46	41.64	3.436	1.240	8.25%	1.726	9.13%
028.53	Manganese, ICP-MS, Microwave (ppm)	7	7	39.20	1.540	39.20	1.746	0.8250	4.45%	0.8415	9.21%
028.31	Manganese, AAS, Dry ash (ppm)	6	6	37.50	4.829	37.72	4.939	2.521	13.09%	1.958	9.26%
028.99	Manganese, Miscellaneous (ppm)	4	3	41.48	3.743	41.48	3.743	2.647	9.02%		9.13%
028.52	Manganese, ICP-MS, Open vessel (ppm)	2	2	41.08	0.8839						
028.00	Manganese, Color (ppm)	1	1	43.50							
030.01	Nitrate, Ion-selective electrode (%)	1		0.0002							
031.43	Phosphorus, ICP, Microwave (%)	42	41	0.7942	0.0355	0.7972	0.0300	0.0059	3.76%	0.0235	4.14%
031.44	Phosphorus, ICP, Dry ash (%)	29	28	0.7495	0.0350	0.7454	0.0261	0.0062	3.50%	0.0217	4.18%
031.01	Phosphorus, Photometric (%)	22	21	0.7795	0.0452	0.7748	0.0356	0.0097	4.59%	0.0148	4.16%
031.42	Phosphorus, ICP, Open vessel (%)	21	21	0.7729	0.0331	0.7729	0.0335	0.0091	4.33%	0.0199	4.16%
031.41	Phosphorus, ICP, Dry ash (%)	17	17	0.7643	0.0549	0.7696	0.0375	0.0114	4.87%	0.0169	4.16%
031.99	Phosphorus, Miscellaneous (%)	6	6	0.7233	0.0575	0.7233	0.0652	0.0333	9.02%	0.0255	4.20%
031.53	Phosphorus, ICP-MS, Microwave (%)	5	5	0.8052	0.0496	0.8052	0.0496	0.0222	6.16%	0.0268	4.13%
031.03	Phosphorus, Autoanalyzer (%)	2	2	0.7891	0.0058						
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.7338	0.0141						
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	1	1	0.8250							
031.06	Phosphorus, Hach Method (%)	1	1	0.7200							
031.51	Phosphorus, ICP-MS, Dry ash (%)	1	1	0.7300							
032.43	Potassium, ICP, Microwave (%)	32	32	0.9335	0.0586	0.9244	0.0353	0.0078	3.81%	0.0194	4.05%
032.44	Potassium, ICP, Dry ash (%)	27	26	0.9052	0.0276	0.9054	0.0225	0.0055	2.49%	0.0242	4.06%
032.42	Potassium, ICP, Open vessel (%)	18	18	0.9331	0.0660	0.9345	0.0685	0.0202	7.33%	0.0213	4.04%
032.41	Potassium, ICP, Dry ash (%)	14	14	0.9056	0.0437	0.9025	0.0406	0.0136	4.50%	0.0287	4.06%
032.31	Potassium, AAS, Dry ash (%)	4	3	0.9000	0.0100	0.9000	0.0100	0.0071	1.11%		4.06%
032.52	Potassium, ICP-MS, Open vessel (%)	3	3	0.8642	0.0724	0.8642	0.0724	0.0418	8.38%	0.0124	4.09%
032.53	Potassium, ICP-MS, Microwave (%)	4	3	0.9013	0.0411	0.9013	0.0411	0.0237	4.56%	0.0060	4.06%
032.99	Potassium, Miscellaneous (%)	3	3	0.8983	0.0569	0.8983	0.0569	0.0328	6.33%	0.0100	4.06%
033.01	Salt as chloride, Poten Cl (%)	23	23	1.374	0.0448	1.374	0.0280	0.0073	2.04%	0.0235	3.81%
033.00	Salt as chloride, Sol Cl (%)	14	14	1.193	0.2905	1.265	0.1059	0.0354	8.37%	0.0252	3.86%

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033.99	Salt, Miscellaneous (%)	14	14	1.233	0.2602	1.276	0.1177	0.0393	9.22%	0.0395	3.86%
033.03	Salt as chloride, Quantab (%)	4	4	1.204	0.1363	1.204	0.1363	0.0682	11.33%	0.0367	3.89%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	1.310	0.1061						
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	9	7	0.3879	0.0566	0.3810	0.0474	0.0224	12.43%	0.0052	18.50%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	3	3	0.3384	0.0521	0.3384	0.0521	0.0301	15.40%	0.0155	18.83%
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	4	2	0.2795	0.1803	0.2795	0.1803			0.0090	19.38%
034.52	Selenium, Total (Se), ICP-MS, Open vessel (ppm)	2	2	0.4225	0.1025						
034.41	Selenium, Total (Se), ICP, Dry ash (ppm)	1	1	0.2225							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	1	1	1.405							
034.99	Selenium, Total (Se), Miscellaneous (ppm)	2	1	0.7535							
035.41	Sodium, ICP, Dry ash (%)	42	42	0.4660	0.0170	0.4655	0.0160	0.0031	3.43%	0.0164	4.49%
035.43	Sodium, ICP, Microwave (%)	39	39	0.4740	0.0198	0.4760	0.0171	0.0034	3.59%	0.0116	4.47%
035.42	Sodium, ICP, Open vessel (%)	18	18	0.4766	0.0315	0.4782	0.0308	0.0091	6.45%	0.0102	4.47%
035.31	Sodium, AAS, Dry ash (%)	5	4	0.4668	0.0385	0.4668	0.0385	0.0222	8.24%		4.49%
035.53	Sodium, ICP-MS, Microwave (%)	4	4	0.4775	0.0173	0.4775	0.0173	0.0086	3.61%	0.0131	4.47%
035.99	Sodium, Miscellaneous (%)	4	3	0.4633	0.0257	0.4633	0.0257	0.0148	5.54%	0.0100	4.49%
035.05	Sodium, Flame Emission (%)	2	2	0.4753	0.0357						
035.52	Sodium, ICP-MS, Open vessel (%)	2	2	0.4437	0.0194						
035.32	Sodium, AAS, Open vessel (%)	1	1	0.3950							
036.42	Sulfur, ICP, Open vessel (%)	16	15	0.3494	0.0237	0.3498	0.0261	0.0084	7.45%	0.0072	4.68%
036.43	Sulfur, ICP, Microwave (%)	14	13	0.3803	0.0458	0.3717	0.0240	0.0083	6.46%	0.0075	4.64%
036.04	Sulfur, LECO (%)	3	3	0.4047	0.0512	0.4047	0.0512	0.0296	12.65%	0.0113	4.58%
036.99	Sulfur, Miscellaneous (%)	2	2	0.3400	0.0354						
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.3373							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.3425							
037.43	Zinc, ICP, Microwave (ppm)	39	39	126.2	8.447	125.5	6.381	1.277	5.09%	2.753	7.73%
037.44	Zinc, ICP, Dry ash (ppm)	24	23	120.9	13.38	122.1	4.735	1.234	3.88%	3.000	7.76%
037.42	Zinc, ICP, Open vessel (ppm)	21	20	124.9	14.18	123.8	13.15	3.676	10.62%	4.092	7.75%
037.41	Zinc, ICP, Dry ash (ppm)	18	17	124.2	5.534	124.2	6.276	1.903	5.05%	2.366	7.74%
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	127.2	4.885	127.2	5.540	2.827	4.36%	7.002	7.71%
037.99	Zinc, Miscellaneous (ppm)	4	4	125.7	8.405	125.7	8.405	4.202	6.68%	2.183	7.73%
037.31	Zinc, AAS, Dry ash (ppm)	4	3	121.3	3.011	121.3	3.011	1.738	2.48%	0.6175	7.77%
037.52	Zinc, ICP-MS, Open vessel (ppm)	2	2	136.6	20.66						
037.34	Zinc, AAS, Dry ash (ppm)	1	1	129.3							
038.42	Molybdenum, ICP, Open vessel (ppm)	6	6	1.174	0.1700	1.174	0.1928	0.0984	16.43%	0.0934	15.62%
038.43	Molybdenum, ICP, Microwave (ppm)	7	6	1.040	0.2004	1.040	0.2273	0.1160	21.86%	0.0840	15.90%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	6	6	1.181	0.0449	1.181	0.0509	0.0260	4.31%	0.0767	15.60%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	1.130	0.0279						
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	2	2	1.043	0.0601						
038.99	Molybdenum, Miscellaneous (ppm)	1	1	1.600							

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040.43	Barium, ICP, Microwave (ppm)	1	1	9.310							
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	8.271							
041.53	Vanadium, ICP-MS, Microwave (ppm)	2	2	0.0725	0.0028						
042.00	Chloride, Titrimetric (%)	9	9	0.8138	0.0606	0.8150	0.0659	0.0275	8.09%	0.0156	4.12%
042.99	Chloride, Miscellaneous (%)	2	2	0.8325	0.0177						
042.01	Chloride, Ion-selective electrode (%)	1	1	0.7550							
102.02	Niacin, LC (ppm)	1	1	91.85							
104.03	Riboflavin, LC (ppm)	2	2	7.275	2.722						
105.00	Thiamine, LC (ppm)	2	2	11.02	2.514						
106.02	Vitamin A, LC (KU / kg)	15	13	8.928	1.847	8.751	1.629	0.5648	18.62%	1.029	
106.01	Vitamin A, UV (KU / kg)	1	1	8.550							
107.99	Vitamin B12, Miscellaneous (ppb)	1	1	16.00							
108.02	Vitamin D3, LC (KU / kg)	4	2	106.1	149.7	106.1	149.7				
108.99	Vitamin D3, Miscellaneous (KU / kg)	2	1	0.1785							
109.02	Vitamin E, LC (IU / kg)	10	9	69.67	19.94	65.56	10.96	4.567	16.72%	3.050	
109.99	Vitamin E, Miscellaneous (IU / kg)	2	2	60.25	5.303						
112.01	Pyridoxine, LC (µg / g)	1	1	5.765							
113.02	Folic acid, LC (ppm)	1	1	0.7200							
114.99	Biotin, Miscellaneous (ppm)	1	1	0.1039							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	2	2	1.939	2.187						
115.99	Non Protein N (NPN), Miscellaneous (%)	1	1	0.7034							
120.00	Alanine, Post-col Ninhydrin Der (%)	13	12	1.914	0.0735	1.924	0.0520	0.0187	2.70%	0.0205	3.62%
120.05	Alanine, Pre-col AQC Der (%)	8	7	1.981	0.0584	1.966	0.0257	0.0121	1.31%	0.0143	3.61%
120.02	Alanine, Post-col OPA Der (%)	2	2	1.827	0.0941						
120.99	Alanine, Miscellaneous (%)	1	1	1.965							
121.00	Arginine, Post-col Ninhydrin Der (%)	13	13	1.616	0.0539	1.623	0.0426	0.0148	2.62%	0.0199	3.72%
121.05	Arginine, Pre-col AQC Der (%)	8	7	1.668	0.1025	1.668	0.1163	0.0549	6.97%	0.0120	3.70%
121.02	Arginine, Post-col OPA Der (%)	2	2	1.505	0.0205						
121.99	Arginine, Miscellaneous (%)	1	1	1.810							
122.00	Aspartic, Post-col Ninhydrin Der (%)	13	13	2.392	0.0833	2.404	0.0593	0.0206	2.47%	0.0297	3.51%
122.05	Aspartic, Pre-col AQC Der (%)	8	7	2.465	0.0878	2.465	0.0996	0.0470	4.04%	0.0322	3.49%
122.02	Aspartic, Post-col OPA Der (%)	2	2	2.267	0.0877						
122.99	Aspartic, Miscellaneous (%)	1	1	2.515							
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	13	13	0.4342	0.0278	0.4330	0.0258	0.0090	5.96%	0.0107	4.54%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	8	7	0.3973	0.0712	0.3973	0.0808	0.0382	20.33%	0.0099	4.60%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	2	2	0.4755	0.0064						
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.4550							
125.00	Glutamic, Post-col Ninhydrin Der (%)	13	12	5.555	0.2376	5.570	0.2334	0.0842	4.19%	0.0380	3.09%
125.05	Glutamic, Pre-col AQC Der (%)	8	7	5.627	0.3188	5.663	0.2729	0.1289	4.82%	0.0808	3.08%
125.02	Glutamic, Post-col OPA Der (%)	2	2	5.077	0.4342						

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125.99	Glutamic, Miscellaneous (%)	1	1	5.390							
126.00	Glycine, Post-col Ninhydrin Der (%)	13	12	1.542	0.0465	1.547	0.0382	0.0138	2.47%	0.0096	3.75%
126.05	Glycine, Pre-col AQC Der (%)	8	8	1.591	0.1479	1.556	0.0725	0.0320	4.66%	0.0459	3.74%
126.02	Glycine, Post-col OPA Der (%)	2	2	1.457	0.0810						
126.99	Glycine, Miscellaneous (%)	1	1	1.960							
127.00	Histidine, Post-col Ninhydrin Der (%)	13	12	0.6918	0.0371	0.6918	0.0421	0.0152	6.08%	0.0112	4.23%
127.05	Histidine, Pre-col AQC Der (%)	8	8	0.7133	0.0566	0.7133	0.0642	0.0284	9.00%	0.0392	4.21%
127.02	Histidine, Post-col OPA Der (%)	2	2	0.6753	0.0499						
127.99	Histidine, Miscellaneous (%)	1	1	0.6800							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	13	13	1.180	0.0939	1.177	0.0980	0.0340	8.33%	0.0272	3.90%
128.05	Isoleucine, Pre-col AQC Der (%)	8	8	1.177	0.0918	1.194	0.0589	0.0261	4.94%	0.0310	3.89%
128.02	Isoleucine, Post-col OPA Der (%)	2	2	1.131	0.1711						
128.99	Isoleucine, Miscellaneous (%)	1	1	1.140							
129.00	Leucine, Post-col Ninhydrin Der (%)	13	13	2.989	0.0948	3.000	0.0720	0.0250	2.40%	0.0495	3.39%
129.05	Leucine, Pre-col AQC Der (%)	8	8	2.999	0.0826	2.999	0.0937	0.0414	3.12%	0.0488	3.39%
129.02	Leucine, Post-col OPA Der (%)	2	2	2.814	0.1962						
129.99	Leucine, Miscellaneous (%)	1	1	2.905							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	13	13	1.250	0.0830	1.260	0.0571	0.0198	4.53%	0.0253	3.86%
130.05	L-Lysine, Pre-col AQC Der (%)	8	7	1.291	0.0702	1.290	0.0767	0.0362	5.95%	0.0165	3.85%
130.02	L-Lysine, Post-col OPA Der (%)	2	2	1.253	0.1672						
130.99	L-Lysine, Miscellaneous (%)	1	1	1.465							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	13	12	0.5400	0.0283	0.5364	0.0198	0.0072	3.69%	0.0095	4.39%
131.05	Methionine, PAO Pre-col AQC Der (%)	8	8	0.5632	0.0759	0.5511	0.0545	0.0241	9.88%	0.0188	4.37%
131.02	Methionine, PAO Post-col OPA Der (%)	2	2	0.5210	0.0085						
131.99	Methionine, Miscellaneous (%)	1	1	0.5750							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	13	13	1.448	0.0860	1.460	0.0604	0.0209	4.14%	0.0264	3.78%
132.05	Phenylalanine, Pre-col AQC Der (%)	8	8	1.437	0.0319	1.437	0.0362	0.0160	2.52%	0.0238	3.79%
132.02	Phenylalanine, Post-col OPA Der (%)	2	2	1.399	0.0555						
132.99	Phenylalanine, Miscellaneous (%)	1	1	1.480							
133.00	Proline, Post-col Ninhydrin Der (%)	13	13	2.096	0.0619	2.097	0.0664	0.0230	3.17%	0.0372	3.58%
133.05	Proline, Pre-col AQC Der (%)	8	8	2.122	0.0407	2.121	0.0426	0.0188	2.01%	0.0348	3.57%
133.99	Proline, Miscellaneous (%)	2	2	2.208	0.0743						
134.00	Serine, Post-col Ninhydrin Der (%)	13	12	1.393	0.0657	1.397	0.0368	0.0133	2.64%	0.0186	3.80%
134.05	Serine, Pre-col AQC Der (%)	8	8	1.407	0.0475	1.409	0.0497	0.0219	3.52%	0.0308	3.80%
134.02	Serine, Post-col OPA Der (%)	2	2	1.241	0.1397						
134.99	Serine, Miscellaneous (%)	1	1	1.465							
135.00	Threonine, Post-col Ninhydrin Der (%)	13	13	1.072	0.0403	1.076	0.0290	0.0101	2.70%	0.0213	3.96%
135.05	Threonine, Pre-col AQC Der (%)	8	8	1.076	0.0184	1.076	0.0208	0.0092	1.93%	0.0168	3.96%
135.02	Threonine, Post-col OPA Der (%)	2	2	0.9900	0.0212						
135.99	Threonine, Miscellaneous (%)	1	1	1.125							

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136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	6	6	0.3169	0.0156	0.3158	0.0150	0.0077	4.76%	0.0071	4.76%
136.05	Tryptophan, Pre-col AQC Der (%)	4	4	0.2965	0.0967	0.2965	0.0967	0.0484	32.62%	0.0253	4.80%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	2	2	0.3727	0.1410						
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.2808	0.0435						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	2	2	0.1564	0.1929						
136.99	Tryptophan, Miscellaneous (%)	2	2	0.2665	0.0092						
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	12	1.006	0.1340	1.011	0.1404	0.0506	13.88%	0.0202	3.99%
137.05	Tyrosine, Pre-col AQC Der (%)	8	7	1.027	0.1186	1.027	0.1345	0.0635	13.10%	0.0132	3.98%
137.02	Tyrosine, Post-col OPA Der (%)	2	2	0.8155	0.0361						
137.99	Tyrosine, Miscellaneous (%)	1	1	1.080							
138.00	Valine, Post-col Ninhydrin Der (%)	13	13	1.354	0.1339	1.367	0.0808	0.0280	5.91%	0.0230	3.82%
138.05	Valine, Pre-col AQC Der (%)	8	8	1.361	0.0840	1.380	0.0430	0.0190	3.11%	0.0294	3.81%
138.02	Valine, Post-col OPA Der (%)	2	2	1.317	0.1863						
138.99	Valine, Miscellaneous (%)	1	1	1.345							
139.00	Taurine, Post-col Ninhydrin Der (%)	4	3	0.1107	0.0352	0.1107	0.0352				5.57%
139.05	Taurine, Pre-col AQC Der (%)	2	2	0.1278	0.0619						
139.02	Taurine, Post-col OPA Der (%)	1	1	0.0935							
139.03	Taurine, Pre-col Dansyl Cl Der (%)	1	1	0.1150							
160.10	Fructose, HPAEC PAD (%)	2	1	0.0700							
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.10	Glucose, HPAEC PAD (%)	2	1	0.0400							
163.10	Lactose, HPAEC PAD (%)	2	1	0.0100							
164.10	Maltose, HPAEC PAD (%)	2	1	0.0200							
165.10	Sucrose, HPAEC PAD (%)	2	2	2.193	0.4419						
166.10	Raffinose, HPAEC PAD (%)	2	2	0.4275	0.1308						
167.10	Stachyose, HPAEC PAD (%)	2	2	1.028	0.2015						
400.01	Water Activity, Aqualab chilled mirror (Units)	10	10	0.3407	0.0258	0.3349	0.0119	0.0047	3.55%	0.0036	
400.99	Water Activity, Miscellaneous (Units)	6	6	0.3683	0.0627	0.3680	0.0704	0.0359	19.13%	0.0065	
413.01	Starch, Resistant, Enzymatic-Colorimetric (%)	1	1	0.5500							
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	2	2	0.0271	0.0052						
516.00	Arsenic, Total (As), AA, Hydride (ppm)	1	1	0.0320							
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	1		20.00							
516.52	Arsenic, Total (As), ICP-MS, Open vessel (ppm)	1		0.1000							
518.41	Cadmium, ICP, Dry ash (ppm)	2	2	0.0415	0.0169						
518.43	Cadmium, ICP, Microwave (ppm)	2	2	0.0390	0.0015						
518.53	Cadmium, ICP-MS, Microwave (ppm)	2	2	0.0300	0.0041						
518.52	Cadmium, ICP-MS, Open vessel (ppm)	1		0.1000							
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	5	4	1.195	0.4474	1.195	0.4474	0.2237	37.43%	0.0147	15.57%
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	3	3	0.6485	0.1052	0.6485	0.1052	0.0608	16.23%	0.0470	17.07%
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	2	2	0.8082	0.0274						

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
520.42	Chromium, Total (Cr), ICP, Open vessel (ppm)	2	2	1.061	0.0134						
520.52	Chromium, Total (Cr), ICP-MS, Open vessel (ppm)	1	1	0.2436							
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.5476	0.1582	0.5476	0.1582	0.1119	28.90%	0.2655	17.51%
526.41	Lead, ICP, Dry ash (ppm)	2	2	0.3331	0.2143						
526.43	Lead, ICP, Microwave (ppm)	2	1	0.8487							
526.52	Lead, ICP-MS, Open vessel (ppm)	1	1	0.3750							
529.99	Mercury, Miscellaneous (ppb)	3	3	910.4	1,576	910.4	1,576				16.22%
539.43	Nickel, ICP, Microwave (ppm)	4	4	3.001	1.226	3.001	1.226	0.6129	40.85%	0.1543	13.56%
539.53	Nickel, ICP-MS, Microwave (ppm)	3	3	1.807	0.2107	1.807	0.2107	0.1216	11.66%	0.1152	14.63%
539.41	Nickel, ICP, Dry ash (ppm)	1	1	1.685							
539.52	Nickel, ICP-MS, Open vessel (ppm)	1	1	1.610							
710.99	Lauric Acid (12:0), Miscellaneous (% (w/w))	1	1	0.0053							
714.99	Myristic Acid (14:0), Miscellaneous (% (w/w))	1	1	0.0435							
716.99	Palmitic Acid (16:0), Miscellaneous (% (w/w))	1	1	1.705							
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (% (w/w))	1	1	0.2732							
722.99	Stearic Acid (18:0), Miscellaneous (% (w/w))	1	1	0.4762							
724.99	Oleic Acid (9c-18:1), Miscellaneous (% (w/w))	1	1	2.622							
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (% (w/w))	1	1	2.601							
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (% (w/w))	1	1	0.1546							
730.99	Arachidic Acid (20:0), Miscellaneous (% (w/w))	1	1	0.0163							
732.99	Gondoic Acid (11c-20:1), Miscellaneous (% (w/w))	1	1	0.0345							
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	0.0110							
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	0.0111							
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							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.1624							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.0592							
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	2.572							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	3.776							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	2.831							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	7.955							

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



Animal Feed Scheme

Dry Cat Food

Test Material Code # 202526

Method Precision Report

Methods Reported: 130

Labs Reporting: 202

Issue Date : 07/31/2025

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
001.00	Loss on Drying, Vac 95°C 5 hr (%)	6	5	5.167	0.2016	0.2235	0.0374	0.2266	4.33%	0.72%	4.39%	6.055
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	84	79	5.288	0.6103	0.1619	0.0869	0.1837	3.10%	1.66%	3.52%	2.115
001.99	Loss on Drying, Miscellaneous (%)	19	17	5.108	0.8853	0.6295	0.0968	0.6369	12.61%	1.94%	12.76%	6.577
002.01	Protein, Crude, Auto Kjell-Foss (%)	14	12	30.38	0.2697	0.2533	0.1310	0.2851	0.83%	0.43%	0.94%	2.177
002.05	Protein, Crude, Copper, Boric Acid (%)	15	15	30.33	0.2427	0.2319	0.1015	0.2531	0.76%	0.33%	0.83%	2.493
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	153	146	30.66	1.095	0.2786	0.1985	0.3421	0.91%	0.65%	1.11%	1.724
002.11	Protein, Crude, NIR (%)	6	6	29.56	1.235	1.232	0.1119	1.237	4.17%	0.38%	4.19%	11.05
003.06	Fat, Crude, Pet Ether (%)	17	16	6.181	0.1775	0.1636	0.0973	0.1904	2.65%	1.57%	3.08%	1.956
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	7	6.607	1.156	0.2296	0.0775	0.2423	3.70%	1.25%	3.90%	3.128
003.10	Fat, Crude, Randall, Pet Ether (%)	26	24	6.145	0.2212	0.1294	0.1195	0.1761	2.12%	1.96%	2.88%	1.474
003.11	Fat, Crude, NIR (%)	6	5	8.083	1.445	1.168	0.0400	1.168	13.75%	0.47%	13.76%	29.21
003.14	Fat, Crude, Ankom (%)	42	39	6.158	0.4675	0.2541	0.0940	0.2709	4.08%	1.51%	4.35%	2.883
004.00	Fiber, Crude, Asbestos Free (%)	12	11	3.032	0.8617	0.4949	0.1466	0.5162	17.51%	5.19%	18.27%	3.521
004.06	Fiber, Crude, Fibertec (%)	14	13	3.298	0.3961	0.4045	0.0706	0.4106	12.33%	2.15%	12.51%	5.815
004.07	Fiber, Crude, ANKOM (%)	72	66	3.082	0.6391	0.3751	0.1276	0.3962	12.55%	4.27%	13.26%	3.104
005.00	Ash, 2h @ 600°C (%)	110	106	5.745	0.5888	0.1802	0.0848	0.1991	3.18%	1.50%	3.51%	2.349
005.03	Ash, Microwave furnace (%)	8	6	5.868	0.0471		0.0532			0.91%		
005.05	Ash, 3h @ 550°C (%)	35	31	5.652	0.0720	0.0553	0.0244	0.0605	0.98%	0.43%	1.07%	2.479
005.99	Ash, Miscellaneous (%)	9	9	5.633	0.1934	0.1908	0.0453	0.1961	3.39%	0.80%	3.48%	4.325
008.02	Fiber, Acid Detergent, Crucible (%)	9	8	6.534	1.433	1.524	0.1316	1.530	23.18%	2.00%	23.26%	11.62
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	42	38	6.441	2.000	1.284	0.2088	1.301	21.03%	3.42%	21.30%	6.231
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	7	6	15.30	1.691	1.680	0.2657	1.701	10.99%	1.74%	11.12%	6.403
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	39	36	17.00	3.499	1.985	0.3928	2.023	12.16%	2.41%	12.40%	5.151
010.99	Moisture, Miscellaneous (%)	13	11	5.301	0.9379	0.6433	0.0966	0.6505	12.62%	1.89%	12.76%	6.737
011.01	Loss on Drying, HT, 135°C 2hr (%)	62	58	5.701	0.3115	0.2526	0.0772	0.2641	4.43%	1.35%	4.64%	3.423
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	6	5	5.803	0.1507	0.1477	0.0429	0.1538	2.54%	0.74%	2.65%	3.585
012.00	Starch, Polarimetric (Ewers) (%)	14	13	33.27	0.7557	0.7447	0.1811	0.7664	2.24%	0.54%	2.30%	4.231
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	7	6	27.01	8.212	1.120	0.5806	1.261	3.72%	1.93%	4.19%	2.173

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012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	8	8	31.36	1.129	1.037	0.6342	1.215	3.31%	2.02%	3.88%	1.916
013.00	Fat, Pretreat, Acid hydrolysis (%)	31	27	9.001	0.6592	0.5084	0.1294	0.5246	5.66%	1.44%	5.84%	4.054
013.02	Fat, Pretreat, Mojonnier, Bak Ext, Acid hydrolysis (%)	54	49	9.433	0.3920	0.3205	0.1388	0.3492	3.40%	1.47%	3.70%	2.517
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	8	7	8.793	0.3714	0.3835	0.1330	0.4059	4.37%	1.52%	4.63%	3.053
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	20	19	8.593	1.276	0.5938	0.2077	0.6290	6.71%	2.35%	7.11%	3.029
015.43	Aluminum, ICP, Microwave (ppm)	7	7	45.32	9.645	9.590	1.457	9.700	21.16%	3.21%	21.40%	6.658
019.08	Calcium, EDTA (%)	5	5	0.7031	0.1122	0.1119	0.0116	0.1125	15.92%	1.65%	16.00%	9.711
019.31	Calcium, AAS, Dry ash (%)	13	12	0.7036	0.0405	0.0260	0.0188	0.0321	3.65%	2.65%	4.51%	1.703
019.41	Calcium, ICP, Dry ash (%)	18	17	0.6889	0.0298	0.0268	0.0184	0.0325	3.89%	2.67%	4.72%	1.765
019.42	Calcium, ICP, Open vessel (%)	21	19	0.7134	0.0605	0.0605	0.0159	0.0625	8.50%	2.23%	8.79%	3.938
019.43	Calcium, ICP, Microwave (%)	38	34	0.7059	0.0464	0.0239	0.0195	0.0308	3.43%	2.80%	4.43%	1.583
019.44	Calcium, ICP, Dry ash (%)	28	26	0.6778	0.0241	0.0225	0.0137	0.0263	3.32%	2.03%	3.89%	1.917
019.53	Calcium, ICP-MS, Microwave (%)	9	9	0.6722	0.0455	0.0447	0.0118	0.0463	6.66%	1.76%	6.89%	3.912
019.99	Calcium, Miscellaneous (%)	8	8	0.6238	0.0593	0.0589	0.0103	0.0598	9.44%	1.65%	9.58%	5.806
021.53	Cobalt, ICP-MS, Microwave (ppm)	6	6	0.2170	0.0229	0.0140	0.0256	0.0292	6.45%	11.80%	13.44%	1.140
022.41	Copper, ICP, Dry ash (ppm)	14	12	16.04	3.908	2.781	0.8332	2.903	18.22%	5.46%	19.02%	3.485
022.42	Copper, ICP, Open vessel (ppm)	20	18	16.28	1.069	1.025	0.4577	1.122	6.28%	2.80%	6.87%	2.452
022.43	Copper, ICP, Microwave (ppm)	39	36	16.50	1.494	0.9914	0.4902	1.106	6.09%	3.01%	6.80%	2.256
022.44	Copper, ICP, Dry ash (ppm)	27	25	15.40	0.9127	0.7144	0.4088	0.8231	4.61%	2.64%	5.31%	2.013
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	15.80	0.4654	0.3875	0.3645	0.5320	2.45%	2.31%	3.37%	1.459
025.41	Iron, ICP, Dry ash (ppm)	13	11	167.2	18.70	8.733	5.712	10.43	5.08%	3.32%	6.07%	1.827
025.42	Iron, ICP, Open vessel (ppm)	20	18	177.7	19.18	12.96	7.025	14.74	7.16%	3.88%	8.15%	2.098
025.43	Iron, ICP, Microwave (ppm)	27	24	185.8	13.16	9.545	3.684	10.23	5.20%	2.01%	5.57%	2.777
025.53	Iron, ICP-MS, Microwave (ppm)	6	6	180.8	14.47	13.09	8.717	15.73	7.24%	4.82%	8.70%	1.804
027.41	Magnesium, ICP, Dry ash (%)	12	11	0.1740	0.0404	0.0073	0.0054	0.0091	4.49%	3.35%	5.60%	1.673
027.42	Magnesium, ICP, Open vessel (%)	20	20	0.1672	0.0115	0.0108	0.0059	0.0122	6.44%	3.50%	7.33%	2.091
027.43	Magnesium, ICP, Microwave (%)	33	30	0.1744	0.0349	0.0088	0.0036	0.0095	5.29%	2.16%	5.71%	2.642
027.44	Magnesium, ICP, Dry ash (%)	27	26	0.1606	0.0059	0.0055	0.0032	0.0063	3.39%	1.96%	3.92%	1.999
028.31	Manganese, AAS, Dry ash (ppm)	6	6	37.50	4.829	4.667	1.756	4.986	12.45%	4.68%	13.30%	2.840
028.41	Manganese, ICP, Dry ash (ppm)	13	11	44.69	12.46	2.489	1.420	2.865	6.04%	3.45%	6.96%	2.018
028.42	Manganese, ICP, Open vessel (ppm)	22	21	41.03	3.066	2.827	1.656	3.276	6.86%	4.02%	7.96%	1.979
028.43	Manganese, ICP, Microwave (ppm)	36	34	41.21	2.035	1.567	1.076	1.901	3.79%	2.61%	4.60%	1.766
028.44	Manganese, ICP, Dry ash (ppm)	27	24	40.19	1.200	0.7763	1.0000	1.266	1.93%	2.48%	3.14%	1.266
028.53	Manganese, ICP-MS, Microwave (ppm)	7	7	39.20	1.540	1.462	0.6858	1.614	3.73%	1.75%	4.12%	2.354
031.01	Phosphorus, Photometric (%)	22	19	0.7795	0.0452	0.0316	0.0106	0.0334	4.09%	1.37%	4.31%	3.141
031.41	Phosphorus, ICP, Dry ash (%)	17	16	0.7643	0.0549	0.0331	0.0135	0.0358	4.28%	1.74%	4.62%	2.655
031.42	Phosphorus, ICP, Open vessel (%)	21	19	0.7729	0.0331	0.0314	0.0138	0.0343	4.07%	1.79%	4.45%	2.489
031.43	Phosphorus, ICP, Microwave (%)	42	40	0.7942	0.0355	0.0228	0.0191	0.0298	2.86%	2.40%	3.73%	1.557

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031.44	Phosphorus, ICP, Dry ash (%)	29	26	0.7495	0.0350	0.0244	0.0151	0.0287	3.28%	2.03%	3.85%	1.902
031.53	Phosphorus, ICP-MS, Microwave (%)	5	5	0.8052	0.0496	0.0469	0.0228	0.0522	5.83%	2.83%	6.48%	2.289
031.99	Phosphorus, Miscellaneous (%)	6	6	0.7233	0.0575	0.0553	0.0224	0.0596	7.64%	3.09%	8.24%	2.667
032.41	Potassium, ICP, Dry ash (%)	14	12	0.9056	0.0437	0.0313	0.0176	0.0359	3.50%	1.96%	4.01%	2.045
032.42	Potassium, ICP, Open vessel (%)	18	17	0.9331	0.0660	0.0658	0.0155	0.0676	7.08%	1.67%	7.27%	4.364
032.43	Potassium, ICP, Microwave (%)	32	29	0.9335	0.0586	0.0293	0.0137	0.0323	3.19%	1.49%	3.52%	2.365
032.44	Potassium, ICP, Dry ash (%)	27	25	0.9052	0.0276	0.0193	0.0169	0.0257	2.13%	1.86%	2.82%	1.522
033.00	Salt as chloride, Sol Cl (%)	14	12	1.193	0.2905	0.1228	0.0171	0.1240	9.73%	1.35%	9.82%	7.262
033.01	Salt as chloride, Poten Cl (%)	23	21	1.374	0.0448	0.0187	0.0239	0.0303	1.36%	1.74%	2.21%	1.270
033.99	Salt, Miscellaneous (%)	14	12	1.233	0.2602	0.1071	0.0272	0.1105	8.32%	2.11%	8.58%	4.069
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	9	7	0.3879	0.0566	0.0566	0.0036	0.0567	14.59%	0.94%	14.62%	15.55
035.41	Sodium, ICP, Dry ash (%)	42	40	0.4660	0.0170	0.0127	0.0108	0.0167	2.75%	2.33%	3.60%	1.545
035.42	Sodium, ICP, Open vessel (%)	18	16	0.4766	0.0315	0.0311	0.0060	0.0317	6.51%	1.26%	6.63%	5.261
035.43	Sodium, ICP, Microwave (%)	39	38	0.4740	0.0198	0.0160	0.0101	0.0189	3.36%	2.12%	3.98%	1.871
036.42	Sulfur, ICP, Open vessel (%)	16	14	0.3494	0.0237	0.0233	0.0045	0.0237	6.69%	1.30%	6.82%	5.248
036.43	Sulfur, ICP, Microwave (%)	14	11	0.3803	0.0458	0.0195	0.0048	0.0201	5.29%	1.31%	5.45%	4.167
037.41	Zinc, ICP, Dry ash (ppm)	18	17	124.2	5.534	5.310	2.206	5.750	4.27%	1.78%	4.63%	2.607
037.42	Zinc, ICP, Open vessel (ppm)	21	19	124.9	14.18	10.55	3.972	11.27	8.59%	3.24%	9.18%	2.838
037.43	Zinc, ICP, Microwave (ppm)	39	38	126.2	8.447	7.184	2.289	7.540	5.73%	1.82%	6.01%	3.294
037.44	Zinc, ICP, Dry ash (ppm)	24	21	120.9	13.38	6.072	3.036	6.789	4.92%	2.46%	5.50%	2.236
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	127.2	4.885	3.020	5.430	6.214	2.38%	4.27%	4.89%	1.144
038.42	Molybdenum, ICP, Open vessel (ppm)	6	6	1.174	0.1700	0.1637	0.0651	0.1762	13.95%	5.54%	15.01%	2.707
038.43	Molybdenum, ICP, Microwave (ppm)	7	6	1.040	0.2004	0.1946	0.0677	0.2061	18.72%	6.51%	19.82%	3.043
038.53	Molybdenum, ICP-MS, Microwave (ppm)	6	6	1.181	0.0449	0.0096	0.0621	0.0628	0.81%	5.26%	5.32%	1.012
042.00	Chloride, Titrimetric (%)	9	9	0.8138	0.0606	0.0600	0.0120	0.0612	7.37%	1.48%	7.52%	5.086
106.02	Vitamin A, LC (KU / kg)	15	12	8.928	1.847	1.168	0.7741	1.401	13.66%	9.06%	16.39%	1.810
109.02	Vitamin E, LC (IU / kg)	10	8	69.67	19.94	7.732	2.658	8.176	12.18%	4.19%	12.88%	3.076
120.00	Alanine, Post-col Ninhydrin Der (%)	13	11	1.914	0.0735	0.0403	0.0170	0.0437	2.08%	0.88%	2.26%	2.573
120.05	Alanine, Pre-col AQC Der (%)	8	6	1.981	0.0584	0.0155	0.0076	0.0173	0.79%	0.39%	0.88%	2.268
121.00	Arginine, Post-col Ninhydrin Der (%)	13	12	1.616	0.0539	0.0315	0.0179	0.0363	1.94%	1.10%	2.23%	2.023
121.05	Arginine, Pre-col AQC Der (%)	8	7	1.668	0.1025	0.1024	0.0076	0.1027	6.14%	0.45%	6.16%	13.58
122.00	Aspartic, Post-col Ninhydrin Der (%)	13	11	2.392	0.0833	0.0413	0.0200	0.0459	1.72%	0.83%	1.91%	2.293
122.05	Aspartic, Pre-col AQC Der (%)	8	7	2.465	0.0878	0.0866	0.0204	0.0890	3.51%	0.83%	3.61%	4.369
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	13	13	0.4342	0.0278	0.0270	0.0091	0.0285	6.22%	2.10%	6.57%	3.123
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	8	6	0.3973	0.0712	0.0609	0.0030	0.0610	14.71%	0.72%	14.73%	20.34
125.00	Glutamic, Post-col Ninhydrin Der (%)	13	12	5.555	0.2376	0.2361	0.0378	0.2391	4.25%	0.68%	4.31%	6.328
125.05	Glutamic, Pre-col AQC Der (%)	8	7	5.627	0.3188	0.3166	0.0526	0.3210	5.63%	0.93%	5.70%	6.101
126.00	Glycine, Post-col Ninhydrin Der (%)	13	11	1.542	0.0465	0.0294	0.0071	0.0302	1.89%	0.46%	1.95%	4.250

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126.05	Glycine, Pre-col AQC Der (%)	8	6	1.591	0.1479	0.0516	0.0250	0.0573	3.35%	1.62%	3.73%	2.293
127.00	Histidine, Post-col Ninhydrin Der (%)	13	11	0.6918	0.0371	0.0313	0.0184	0.0363	4.49%	2.64%	5.21%	1.974
127.05	Histidine, Pre-col AQC Der (%)	8	8	0.7133	0.0566	0.0531	0.0278	0.0599	7.45%	3.89%	8.40%	2.157
128.00	Isoleucine, Post-col Ninhydrin Der (%)	13	12	1.180	0.0939	0.0845	0.0212	0.0871	7.09%	1.78%	7.31%	4.107
128.05	Isoleucine, Pre-col AQC Der (%)	8	6	1.177	0.0918	0.0429	0.0126	0.0447	3.56%	1.04%	3.71%	3.556
129.00	Leucine, Post-col Ninhydrin Der (%)	13	12	2.989	0.0948	0.0524	0.0383	0.0648	1.74%	1.27%	2.15%	1.695
129.05	Leucine, Pre-col AQC Der (%)	8	7	2.999	0.0826	0.0721	0.0200	0.0748	2.42%	0.67%	2.51%	3.734
130.00	L-Lysine, Post-col Ninhydrin Der (%)	13	11	1.250	0.0830	0.0378	0.0175	0.0416	3.00%	1.38%	3.30%	2.384
130.05	L-Lysine, Pre-col AQC Der (%)	8	6	1.291	0.0702	0.0766	0.0044	0.0767	5.92%	0.34%	5.93%	17.60
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	13	11	0.5400	0.0283	0.0154	0.0082	0.0174	2.88%	1.54%	3.27%	2.119
131.05	Methionine, PAO Pre-col AQC Der (%)	8	6	0.5632	0.0759	0.0409	0.0074	0.0415	7.59%	1.37%	7.71%	5.641
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	13	12	1.448	0.0860	0.0565	0.0227	0.0609	3.86%	1.55%	4.16%	2.688
132.05	Phenylalanine, Pre-col AQC Der (%)	8	7	1.437	0.0319	0.0332	0.0122	0.0354	2.31%	0.85%	2.46%	2.898
133.00	Proline, Post-col Ninhydrin Der (%)	13	12	2.096	0.0619	0.0556	0.0439	0.0708	2.65%	2.09%	3.38%	1.614
133.05	Proline, Pre-col AQC Der (%)	8	8	2.122	0.0407	0.0377	0.0218	0.0435	1.77%	1.03%	2.05%	1.997
134.00	Serine, Post-col Ninhydrin Der (%)	13	11	1.393	0.0657	0.0415	0.0147	0.0440	2.95%	1.05%	3.13%	2.984
134.05	Serine, Pre-col AQC Der (%)	8	8	1.407	0.0475	0.0448	0.0220	0.0500	3.19%	1.57%	3.55%	2.266
135.00	Threonine, Post-col Ninhydrin Der (%)	13	11	1.072	0.0403	0.0186	0.0149	0.0238	1.73%	1.38%	2.22%	1.601
135.05	Threonine, Pre-col AQC Der (%)	8	8	1.076	0.0184	0.0162	0.0123	0.0203	1.50%	1.14%	1.89%	1.656
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	6	6	0.3169	0.0156	0.0152	0.0049	0.0160	4.80%	1.55%	5.04%	3.243
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	11	1.006	0.1340	0.1084	0.0226	0.1108	10.52%	2.20%	10.75%	4.891
137.05	Tyrosine, Pre-col AQC Der (%)	8	6	1.027	0.1186	0.0957	0.0053	0.0959	9.06%	0.50%	9.07%	18.12
138.00	Valine, Post-col Ninhydrin Der (%)	13	11	1.354	0.1339	0.0773	0.0173	0.0792	5.62%	1.25%	5.75%	4.587
138.05	Valine, Pre-col AQC Der (%)	8	6	1.361	0.0840	0.0313	0.0076	0.0322	2.25%	0.54%	2.32%	4.267
400.01	Water Activity, Aqualab chilled mirror (Units)	10	9	0.3407	0.0258	0.0086	0.0031	0.0092	2.60%	0.94%	2.76%	2.927
400.99	Water Activity, Miscellaneous (Units)	6	6	0.3683	0.0627	0.0627	0.0039	0.0628	17.01%	1.07%	17.05%	15.95

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