



AAFCO
Association of American Feed Control Officials



Animal Feed Scheme

Lamb Feed, Medicated

Test Material Code # 202525

Method Summary Report

(Precision Report Follows)

Labs Reporting: 155

Methods Reported: 362

Issue Date : 06/30/2025

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 (%)	41	40	10.67	0.2390	10.65	0.2314	0.0457	2.17%	0.1186	2.80%
001.99	Loss on Drying, Miscellaneous (%)	17	15	10.43	1.490	10.72	0.6892	0.2224	6.43%	0.1411	2.80%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	4	3	10.50	0.2898	10.50	0.2898	0.1673	2.76%	0.0293	2.81%
001.03	Loss on Drying, Low temp. methods (%)	2	2	10.71	0.0141						
001.05	Loss on Drying, LECO (%)	1	1	10.65							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	103	102	18.03	0.3636	18.00	0.2604	0.0322	1.45%	0.2026	2.36%
002.05	Protein, Crude, Copper, Boric Acid (%)	20	20	17.80	0.2535	17.80	0.2818	0.0788	1.58%	0.1524	2.37%
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	14	17.74	0.2040	17.76	0.1741	0.0582	0.98%	0.0772	2.37%
002.11	Protein, Crude, NIR (%)	7	7	17.75	1.205	17.75	1.366	0.6456	7.70%	0.1250	2.37%
002.00	Protein, Crude, Crude (%)	2	2	17.41	0.2192						
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	2	2	17.62	0.0248						
002.08	Protein, Crude, Cu/Ti (%)	2	2	17.97	0.2703						
002.04	Protein, Crude, Copper Catalyst (%)	1	1	17.81							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	17.91							
002.99	Protein, Crude, Miscellaneous (%)	1	1	17.95							
003.14	Fat, Crude, Ankom (%)	48	47	3.486	0.4153	3.516	0.2343	0.0427	6.67%	0.0823	3.31%
003.10	Fat, Crude, Randall, Pet Ether (%)	29	29	3.407	0.2630	3.382	0.2194	0.0509	6.49%	0.0865	3.33%
003.06	Fat, Crude, Pet Ether (%)	18	18	3.557	0.2248	3.557	0.2549	0.0751	7.17%	0.0985	3.30%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	10	3.500	0.3037	3.500	0.3444	0.1361	9.84%	0.0389	3.31%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	8	3.652	0.4070	3.567	0.2309	0.1020	6.47%	0.1882	3.30%
003.11	Fat, Crude, NIR (%)	7	7	3.568	0.3614	3.568	0.4098	0.1936	11.49%	0.0864	3.30%
003.12	Fat, Crude, Hexane Ext (%)	5	4	3.513	0.1751	3.513	0.1751	0.0876	4.99%	0.1250	3.31%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	5	4	3.565	0.4256	3.565	0.4256	0.2128	11.94%	0.0697	3.30%
003.99	Fat, Crude, Miscellaneous (%)	4	3	3.468	0.4170	3.468	0.4170	0.2407	12.02%	0.0750	3.32%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	2	2	3.568	0.2877						
004.07	Fiber, Crude, ANKOM (%)	73	72	10.94	1.230	10.82	0.5318	0.0783	4.92%	0.2145	2.80%
004.06	Fiber, Crude, Fibertec (%)	16	16	10.70	0.7776	10.79	0.6102	0.1907	5.65%	0.2482	2.80%
004.11	Fiber, Crude, NIR (%)	6	6	10.29	0.3356	10.29	0.3805	0.1942	3.70%	0.0860	2.82%
004.00	Fiber, Crude, Asbestos Free (%)	5	5	10.56	0.2745	10.56	0.2745	0.1228	2.60%	0.1720	2.81%

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004.03	Fiber, Crude, Fritted Glass (%)	2	2	11.22	0.3361						
004.99	Fiber, Crude, Miscellaneous (%)	1	1	10.40							
005.00	Ash, 2h @ 600°C (%)	84	82	7.709	0.5119	7.662	0.3194	0.0441	4.17%	0.1164	2.94%
005.05	Ash, 3h @ 550°C (%)	24	23	7.944	0.2353	7.964	0.2125	0.0554	2.67%	0.0737	2.93%
005.99	Ash, Miscellaneous (%)	8	8	7.903	0.3842	7.968	0.2648	0.1170	3.32%	0.1317	2.93%
005.11	Ash, NIR (%)	6	6	7.565	1.755	7.565	1.990	1.015	26.30%	0.1642	2.95%
005.02	Ash, LECO (%)	1	1	8.050							
005.03	Ash, Microwave furnace (%)	1	1	7.300							
006.99	Total Sugars, Miscellaneous (%)	4	4	9.953	6.321	9.953	6.321	3.161	63.51%	0.6999	2.83%
006.00	Total Sugars, As sucrose (%)	2	2	5.022	0.3352						
006.03	Total Sugars, Invert w/o Invrns (%)	1	1	4.200							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	41	41	14.55	0.8411	14.55	0.9260	0.1808	6.36%	0.3257	2.62%
008.02	Fiber, Acid Detergent, Crucible (%)	11	11	15.21	0.5412	15.17	0.5280	0.1990	3.48%	0.3217	2.57%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	2	2	14.75	0.1414						
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	37	36	28.94	1.314	28.79	0.9717	0.2024	3.38%	0.2835	1.86%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	28.91	2.331	28.91	2.644	1.045	9.15%	0.5049	1.86%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	2	2	28.37	0.6046						
010.99	Moisture, Miscellaneous (%)	18	17	10.56	0.7646	10.62	0.4717	0.1430	4.44%	0.0888	2.80%
010.11	Moisture, NIR (%)	6	6	10.38	0.8685	10.42	0.8863	0.4523	8.51%	0.0384	2.81%
010.03	Moisture, Karl-Fischer (%)	2	2	9.029	3.254						
011.01	Loss on Drying, HT, 135°C 2hr (%)	61	60	11.47	0.4639	11.50	0.3654	0.0590	3.18%	0.0967	2.77%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	5	5	10.94	0.4251	10.94	0.4251	0.1901	3.89%	0.1558	2.79%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	1	1	10.98							
012.00	Starch, Polarimetric (Ewers) (%)	12	12	20.99	0.6680	21.03	0.6725	0.2427	3.20%	0.2852	2.18%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	9	9	18.53	0.7034	18.53	0.7977	0.3324	4.31%	0.4834	2.32%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	8	8	18.38	0.9533	18.38	1.081	0.4778	5.88%	0.6040	2.33%
012.11	Starch, NIR (%)	3	3	24.75	2.419	24.75	2.419	1.397	9.77%	0.1367	2.01%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	18.54	0.2747						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	18.10							
012.99	Starch, Miscellaneous (%)	1	1	18.30							
013.00	Fat, Pretreat, Acid hydrolysis (%)	18	18	4.310	0.6427	4.368	0.5553	0.1636	12.71%	0.1819	3.20%
013.02	Fat, Pretreat, Mojonniere, Bak Ext, Acid hydrolysis (%)	14	14	4.940	0.4887	4.933	0.5391	0.1801	10.93%	0.2098	3.15%
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	10	10	4.335	0.5684	4.321	0.5388	0.2130	12.47%	0.1252	3.21%
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	6	5	4.282	0.3139	4.282	0.3139	0.1755	7.33%	0.0280	3.21%
013.08	Fat, Pretreat, Roese-Gottlieb Modified, Alkaline Hydrolysis (%)	1	1	2.160							
013.99	Fat, Pretreat, Miscellaneous (%)	1	1	4.050							
014.01	Fiber, Total Dietary, Enz-Grav (%)	4	4	34.02	2.700	34.02	2.700	1.350	7.94%	1.265	1.71%
015.43	Aluminum, ICP, Microwave (ppm)	5	3	73.80	3.141	73.80	3.141	1.813	4.26%	2.154	8.37%
015.41	Aluminum, ICP, Dry ash (ppm)	2	2	69.73	5.635						
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	21.61	9.348						

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015.53	Aluminum, ICP-MS, Microwave (ppm)	2	2	69.61	1.432						
017.42	Boron, ICP, Open vessel (ppm)	4	4	9.014	1.426	9.014	1.426	0.7128	15.82%	1.643	11.49%
017.41	Boron, ICP, Dry ash (ppm)	4	3	8.479	0.7996	8.479	0.7996	0.4616	9.43%	0.1980	11.60%
017.43	Boron, ICP, Microwave (ppm)	4	3	7.258	0.9153	7.258	0.9153	0.6472	12.61%		11.87%
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	8.075							
019.43	Calcium, ICP, Microwave (%)	33	32	1.438	0.1036	1.443	0.0825	0.0182	5.72%	0.0539	3.79%
019.41	Calcium, ICP, Dry ash (%)	17	17	1.479	0.0598	1.478	0.0662	0.0201	4.48%	0.0427	3.77%
019.42	Calcium, ICP, Open vessel (%)	17	17	1.500	0.0782	1.502	0.0827	0.0251	5.50%	0.0542	3.76%
019.31	Calcium, AAS, Dry ash (%)	16	16	1.458	0.0974	1.452	0.0929	0.0290	6.40%	0.0532	3.78%
019.08	Calcium, EDTA (%)	9	9	1.484	0.0301	1.484	0.0342	0.0142	2.30%	0.0360	3.77%
019.53	Calcium, ICP-MS, Microwave (%)	6	6	1.273	0.6067	1.368	0.4533	0.2313	33.14%	0.0622	3.82%
019.99	Calcium, Miscellaneous (%)	6	5	1.539	0.3262	1.539	0.3262	0.0630	21.19%	0.0225	3.75%
019.00	Calcium, Ox-MnO4 Vol. (%)	4	4	1.410	0.1166	1.410	0.1166	0.0583	8.27%	0.0826	3.80%
019.52	Calcium, ICP-MS, Open vessel (%)	2	2	1.304	0.0548						
019.02	Calcium, Hach Method (%)	1	1	1.605							
019.09	Calcium, Ion-selective electrode (%)	1	1	1.464							
019.32	Calcium, AAS, Open vessel (%)	1	1	1.550							
019.33	Calcium, AAS, Microwave (%)	1	1	1.385							
019.44	Calcium, ICP, Dry ash (%)	1	1	1.420							
021.43	Cobalt, ICP, Microwave (ppm)	13	11	0.7113	0.2210	0.6996	0.2231	0.0841	31.89%	0.0460	16.88%
021.53	Cobalt, ICP-MS, Microwave (ppm)	5	4	0.7423	0.0531	0.7423	0.0531	0.0266	7.16%	0.0119	16.73%
021.42	Cobalt, ICP, Open vessel (ppm)	3	3	0.5342	0.1869	0.5342	0.1869	0.1079	35.00%	0.0743	17.58%
021.41	Cobalt, ICP, Dry ash (ppm)	2	2	0.8210	0.3048						
021.31	Cobalt, AAS, Dry ash (ppm)	1	1	0.6645							
021.52	Cobalt, ICP-MS, Open vessel (ppm)	1	1	0.4761							
022.43	Copper, ICP, Microwave (ppm)	22	21	8.450	0.8146	8.379	0.7557	0.2061	9.02%	0.2643	11.62%
022.42	Copper, ICP, Open vessel (ppm)	17	16	8.551	0.8913	8.535	0.9472	0.2960	11.10%	0.4095	11.58%
022.41	Copper, ICP, Dry ash (ppm)	9	9	8.486	2.804	8.520	3.106	1.294	36.45%	1.142	11.59%
022.31	Copper, AAS, Dry ash (ppm)	7	6	9.204	1.048	9.204	1.188	0.6063	12.91%	0.7220	11.45%
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	8.095	0.7933	8.095	0.7933	0.3548	9.80%	0.1382	11.68%
022.99	Copper, Miscellaneous (ppm)	3	3	7.967	0.4509	7.967	0.4509	0.2603	5.66%	0.8000	11.71%
022.44	Copper, ICP, Dry ash (ppm)	2	2	8.723	0.8733						
022.33	Copper, AAS, Microwave (ppm)	1	1	7.675							
022.52	Copper, ICP-MS, Open vessel (ppm)	1	1	8.200							
025.43	Iron, ICP, Microwave (ppm)	26	25	183.0	11.37	182.7	11.50	2.876	6.30%	4.348	7.31%
025.42	Iron, ICP, Open vessel (ppm)	16	16	177.5	11.00	177.3	12.23	3.821	6.90%	7.635	7.34%
025.41	Iron, ICP, Dry ash (ppm)	14	14	184.5	14.04	184.7	13.45	4.494	7.28%	7.579	7.29%
025.31	Iron, AAS, Dry ash (ppm)	9	8	181.6	11.80	181.4	12.91	5.707	7.12%	4.388	7.31%
025.53	Iron, ICP-MS, Microwave (ppm)	6	6	173.9	33.96	173.9	38.51	19.65	22.14%	3.886	7.36%
025.99	Iron, Miscellaneous (ppm)	3	3	168.5	11.83	168.5	11.83	6.828	7.02%	5.813	7.40%

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025.52	Iron, ICP-MS, Open vessel (ppm)	1	1	183.4							
027.43	Magnesium, ICP, Microwave (%)	29	28	0.2775	0.0154	0.2788	0.0139	0.0033	4.99%	0.0118	4.85%
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.2846	0.0138	0.2842	0.0136	0.0042	4.77%	0.0070	4.83%
027.41	Magnesium, ICP, Dry ash (%)	15	15	0.2773	0.0098	0.2775	0.0107	0.0034	3.85%	0.0088	4.85%
027.31	Magnesium, AAS, Dry ash (%)	9	9	0.2830	0.0178	0.2830	0.0202	0.0084	7.14%	0.0100	4.84%
027.53	Magnesium, ICP-MS, Microwave (%)	6	6	0.2422	0.1112	0.2725	0.0471	0.0240	17.28%	0.0123	4.86%
027.99	Magnesium, Miscellaneous (%)	4	4	0.2688	0.0397	0.2688	0.0397	0.0198	14.76%	0.0150	4.87%
027.52	Magnesium, ICP-MS, Open vessel (%)	2	2	0.2809	0.0083						
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.2750							
027.33	Magnesium, AAS, Microwave (%)	1	1	0.2850							
027.44	Magnesium, ICP, Dry ash (%)	1	1	0.2600							
028.43	Manganese, ICP, Microwave (ppm)	28	26	83.26	8.505	82.40	5.873	1.440	7.13%	2.104	8.24%
028.42	Manganese, ICP, Open vessel (ppm)	17	16	82.09	5.055	82.10	5.707	1.783	6.95%	3.561	8.24%
028.41	Manganese, ICP, Dry ash (ppm)	12	12	79.12	2.720	78.97	2.356	0.8502	2.98%	1.838	8.29%
028.31	Manganese, AAS, Dry ash (ppm)	11	10	80.84	3.369	80.84	3.821	1.510	4.73%	1.705	8.26%
028.53	Manganese, ICP-MS, Microwave (ppm)	6	5	81.17	6.922	81.17	6.922	3.869	8.53%	2.929	8.25%
028.99	Manganese, Miscellaneous (ppm)	3	3	76.42	4.201	76.42	4.201	2.425	5.50%	1.900	8.33%
028.44	Manganese, ICP, Dry ash (ppm)	2	2	68.49	10.18						
028.52	Manganese, ICP-MS, Open vessel (ppm)	2	2	78.96	1.598						
028.32	Manganese, AAS, Open vessel (ppm)	1	1	80.55							
028.33	Manganese, AAS, Microwave (ppm)	1	1	84.13							
031.43	Phosphorus, ICP, Microwave (%)	33	32	0.5718	0.0246	0.5725	0.0214	0.0047	3.74%	0.0137	4.35%
031.01	Phosphorus, Photometric (%)	28	27	0.5801	0.0464	0.5780	0.0313	0.0075	5.41%	0.0131	4.34%
031.42	Phosphorus, ICP, Open vessel (%)	18	18	0.5753	0.0326	0.5742	0.0346	0.0102	6.02%	0.0165	4.35%
031.41	Phosphorus, ICP, Dry ash (%)	16	16	0.5701	0.0243	0.5668	0.0203	0.0063	3.57%	0.0133	4.36%
031.53	Phosphorus, ICP-MS, Microwave (%)	6	6	0.4897	0.2284	0.5496	0.1035	0.0528	18.84%	0.0147	4.38%
031.99	Phosphorus, Miscellaneous (%)	3	3	0.6883	0.2529	0.6883	0.2529	0.1460	36.74%	0.0150	4.23%
031.03	Phosphorus, Autoanalyzer (%)	2	2	0.5734	0.0119						
031.44	Phosphorus, ICP, Dry ash (%)	2	2	0.5407	0.0306						
031.06	Phosphorus, Hach Method (%)	1	1	0.6500							
031.52	Phosphorus, ICP-MS, Open vessel (%)	1	1	0.5452							
032.43	Potassium, ICP, Microwave (%)	30	29	1.050	0.0843	1.040	0.0526	0.0122	5.06%	0.0254	3.98%
032.42	Potassium, ICP, Open vessel (%)	17	16	1.055	0.0696	1.056	0.0752	0.0235	7.12%	0.0315	3.97%
032.41	Potassium, ICP, Dry ash (%)	14	14	1.016	0.0605	1.016	0.0686	0.0229	6.75%	0.0326	3.99%
032.31	Potassium, AAS, Dry ash (%)	6	6	0.9825	0.1073	0.9825	0.1216	0.0621	12.38%	0.0179	4.01%
032.53	Potassium, ICP-MS, Microwave (%)	6	6	0.8759	0.4001	0.9799	0.1842	0.0940	18.80%	0.0337	4.01%
032.99	Potassium, Miscellaneous (%)	5	5	1.007	0.0401	1.007	0.0401	0.0179	3.98%	0.0110	4.00%
032.52	Potassium, ICP-MS, Open vessel (%)	2	2	1.015	0.0570						
032.02	Potassium, Flame Emission (%)	1	1	1.045							
032.32	Potassium, AAS, Open vessel (%)	1	1	1.015							

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032.33	Potassium, AAS, Microwave (%)	1	1	1.090							
032.44	Potassium, ICP, Dry ash (%)	1	1	1.045							
033.01	Salt as chloride, Poten Cl (%)	24	22	1.589	0.2278	1.653	0.0267	0.0071	1.62%	0.0167	3.71%
033.00	Salt as chloride, Sol Cl (%)	10	10	1.562	0.2610	1.626	0.0966	0.0382	5.94%	0.0404	3.72%
033.99	Salt, Miscellaneous (%)	8	8	1.380	0.1985	1.380	0.2251	0.0995	16.31%	0.0361	3.81%
033.03	Salt as chloride, Quantab (%)	5	5	0.8726	0.7311	0.8726	0.7311	0.3270	83.79%	0.0652	4.08%
033.05	Salt as chloride, Ion Sel Electrode (%)	2	2	1.623	0.0601						
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	7	7	0.9135	0.2121	0.8802	0.1562	0.0738	17.75%	0.0564	16.31%
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	7	3	0.8505	0.1514	0.8505	0.1514	0.1092	17.80%	0.0463	16.39%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	2	2	0.7148	0.1418						
034.41	Selenium, Total (Se), ICP, Dry ash (ppm)	2	2	0.5360	0.3664						
034.52	Selenium, Total (Se), ICP-MS, Open vessel (ppm)	2	2	0.9128	0.4778						
034.01	Selenium, Total (Se), Fluor (ppm)	1	1	0.9100							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	1	1	1.585							
034.99	Selenium, Total (Se), Miscellaneous (ppm)	2	1	1.315							
035.43	Sodium, ICP, Microwave (%)	22	21	0.4799	0.0185	0.4798	0.0196	0.0053	4.08%	0.0107	4.47%
035.42	Sodium, ICP, Open vessel (%)	17	17	0.4906	0.0336	0.4924	0.0338	0.0103	6.87%	0.0225	4.45%
035.41	Sodium, ICP, Dry ash (%)	14	13	0.4754	0.0225	0.4746	0.0144	0.0050	3.04%	0.0110	4.47%
035.31	Sodium, AAS, Dry ash (%)	6	6	0.6214	0.3946	0.4771	0.0546	0.0279	11.45%	0.0096	4.47%
035.53	Sodium, ICP-MS, Microwave (%)	4	4	0.3558	0.2284	0.3558	0.2284	0.1142	64.18%	0.0115	4.67%
035.99	Sodium, Miscellaneous (%)	4	4	0.4725	0.0119	0.4725	0.0119	0.0060	2.52%	0.0133	4.48%
035.02	Sodium, Em Spect (%)	1	1	0.4500							
035.05	Sodium, Flame Emission (%)	1	1	0.4450							
035.33	Sodium, AAS, Microwave (%)	1	1	0.4900							
035.52	Sodium, ICP-MS, Open vessel (%)	1	1	0.4658							
036.42	Sulfur, ICP, Open vessel (%)	14	14	0.3234	0.0215	0.3234	0.0243	0.0081	7.53%	0.0113	4.74%
036.43	Sulfur, ICP, Microwave (%)	13	13	0.3351	0.0146	0.3366	0.0126	0.0044	3.75%	0.0094	4.71%
036.04	Sulfur, LECO (%)	4	4	0.3445	0.0197	0.3445	0.0197	0.0098	5.72%	0.0120	4.70%
036.99	Sulfur, Miscellaneous (%)	2	2	78.40	110.5						
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.3329							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.0400							
037.43	Zinc, ICP, Microwave (ppm)	28	26	126.4	12.22	126.1	13.02	3.192	10.33%	3.606	7.72%
037.42	Zinc, ICP, Open vessel (ppm)	17	17	123.0	11.41	123.2	11.60	3.518	9.42%	4.220	7.75%
037.41	Zinc, ICP, Dry ash (ppm)	14	13	125.2	7.875	125.4	8.376	2.904	6.68%	2.723	7.73%
037.31	Zinc, AAS, Dry ash (ppm)	9	9	126.6	8.192	126.4	8.857	3.690	7.01%	5.224	7.72%
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	121.4	12.48	121.4	14.15	7.220	11.65%	3.887	7.77%
037.99	Zinc, Miscellaneous (ppm)	4	4	123.1	8.070	123.1	8.070	4.035	6.56%	4.853	7.75%
037.44	Zinc, ICP, Dry ash (ppm)	2	2	106.8	17.08						
037.52	Zinc, ICP-MS, Open vessel (ppm)	2	2	131.3	2.242						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	119.0							

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038.43	Molybdenum, ICP, Microwave (ppm)	12	12	2.799	0.5151	2.717	0.3352	0.1210	12.34%	0.2354	13.76%
038.42	Molybdenum, ICP, Open vessel (ppm)	6	6	2.816	0.6526	2.816	0.7401	0.3777	26.28%	0.4064	13.69%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	5	5	2.879	0.6865	2.879	0.6865	0.3070	23.84%	0.5046	13.64%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	2.426	0.1216						
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	1	1	2.205							
040.43	Barium, ICP, Microwave (ppm)	1	1	12.45							
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	11.17							
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	0.2598							
042.00	Chloride, Titrimetric (%)	7	7	1.015	0.0253	1.015	0.0286	0.0135	2.82%	0.0185	3.99%
042.99	Chloride, Miscellaneous (%)	3	3	1.015	0.0673	1.015	0.0673	0.0388	6.63%	0.0750	3.99%
104.03	Riboflavin, LC (ppm)	2	2	17.61	23.88						
106.02	Vitamin A, LC (KU / kg)	8	7	1,954	5,120	20.80	9.207	4.350	44.26%	5.072	
106.01	Vitamin A, UV (KU / kg)	1	1	12.55							
106.03	#N/A	1	1	25.87							
106.99	Vitamin A, Miscellaneous (KU / kg)	1	1	11.13							
107.99	Vitamin B12, Miscellaneous (ppb)	1		20.00							
108.02	Vitamin D3, LC (KU / kg)	4	3	4.541	2.287	4.541	2.287	1.320	50.36%	1.912	
108.99	Vitamin D3, Miscellaneous (KU / kg)	2	2	3.613	0.5763						
109.02	Vitamin E, LC (IU / kg)	7	7	75.78	22.78	75.78	25.83	12.20	34.09%	7.093	
109.03	#N/A	1	1	74.45							
112.01	Pyridoxine, LC (µg / g)	1	1	4.155							
113.02	Folic acid, LC (ppm)	2	1	0.1207							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	2	2	1.418	1.892						
115.99	Non Protein N (NPN), Miscellaneous (%)	1	1	0.7060							
120.00	Alanine, Post-col Ninhydrin Der (%)	13	13	0.8862	0.0195	0.8874	0.0188	0.0065	2.12%	0.0119	4.07%
120.05	Alanine, Pre-col AQC Der (%)	9	9	0.8816	0.0402	0.8834	0.0415	0.0173	4.70%	0.0100	4.08%
120.02	Alanine, Post-col OPA Der (%)	1	1	0.8955							
120.99	Alanine, Miscellaneous (%)	1	1	0.9025							
121.00	Arginine, Post-col Ninhydrin Der (%)	13	12	1.043	0.0272	1.045	0.0269	0.0097	2.58%	0.0094	3.97%
121.05	Arginine, Pre-col AQC Der (%)	9	8	1.060	0.0620	1.060	0.0703	0.0311	6.63%	0.0147	3.96%
121.02	Arginine, Post-col OPA Der (%)	1	1	1.005							
121.99	Arginine, Miscellaneous (%)	1	1	1.145							
122.00	Aspartic, Post-col Ninhydrin Der (%)	13	13	1.429	0.0285	1.429	0.0318	0.0110	2.22%	0.0156	3.79%
122.05	Aspartic, Pre-col AQC Der (%)	9	9	1.446	0.0916	1.454	0.0848	0.0353	5.83%	0.0350	3.78%
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.428							
122.99	Aspartic, Miscellaneous (%)	1	1	1.263							
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	13	13	0.2951	0.0127	0.2937	0.0114	0.0040	3.88%	0.0049	4.81%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	9	9	0.2833	0.0474	0.2876	0.0433	0.0180	15.05%	0.0125	4.82%
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.3315							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.2900							

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125.00	Glutamic, Post-col Ninhydrin Der (%)	13	13	2.943	0.0808	2.935	0.0731	0.0253	2.49%	0.0331	3.40%
125.05	Glutamic, Pre-col AQC Der (%)	9	9	2.960	0.1180	2.963	0.1158	0.0483	3.91%	0.0761	3.40%
125.02	Glutamic, Post-col OPA Der (%)	1	1	2.945							
125.99	Glutamic, Miscellaneous (%)	1	1	2.805							
126.00	Glycine, Post-col Ninhydrin Der (%)	13	13	0.8577	0.0134	0.8578	0.0150	0.0052	1.74%	0.0115	4.09%
126.05	Glycine, Pre-col AQC Der (%)	9	9	0.8484	0.0356	0.8481	0.0399	0.0166	4.71%	0.0105	4.10%
126.02	Glycine, Post-col OPA Der (%)	1	1	0.8585							
126.99	Glycine, Miscellaneous (%)	1	1	0.4200							
127.00	Histidine, Post-col Ninhydrin Der (%)	13	13	0.4336	0.0170	0.4329	0.0145	0.0050	3.35%	0.0046	4.54%
127.05	Histidine, Pre-col AQC Der (%)	9	9	0.4280	0.0263	0.4282	0.0291	0.0121	6.81%	0.0102	4.54%
127.02	Histidine, Post-col OPA Der (%)	1	1	0.4330							
127.99	Histidine, Miscellaneous (%)	1	1	0.4200							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	13	13	0.6027	0.0273	0.6027	0.0309	0.0107	5.13%	0.0084	4.32%
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	0.6040	0.0587	0.6049	0.0646	0.0269	10.67%	0.0268	4.31%
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.6430							
128.99	Isoleucine, Miscellaneous (%)	1	1	0.6025							
129.00	Leucine, Post-col Ninhydrin Der (%)	13	13	1.306	0.0233	1.304	0.0214	0.0074	1.64%	0.0186	3.84%
129.05	Leucine, Pre-col AQC Der (%)	9	9	1.275	0.0666	1.273	0.0700	0.0292	5.50%	0.0447	3.86%
129.02	Leucine, Post-col OPA Der (%)	1	1	1.314							
129.99	Leucine, Miscellaneous (%)	1	1	1.218							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	15	14	0.7897	0.0268	0.7910	0.0250	0.0083	3.16%	0.0054	4.14%
130.05	L-Lysine, Pre-col AQC Der (%)	9	9	0.7870	0.0660	0.7909	0.0658	0.0274	8.32%	0.0299	4.14%
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.8755							
130.99	L-Lysine, Miscellaneous (%)	1	1	0.7825							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	13	13	0.2550	0.0149	0.2550	0.0133	0.0046	5.22%	0.0045	4.91%
131.05	Methionine, PAO Pre-col AQC Der (%)	9	9	0.2580	0.0245	0.2542	0.0177	0.0074	6.98%	0.0177	4.92%
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.2600							
131.99	Methionine, Miscellaneous (%)	1	1	0.2525							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	13	13	0.7538	0.0331	0.7513	0.0317	0.0110	4.21%	0.0107	4.18%
132.05	Phenylalanine, Pre-col AQC Der (%)	9	9	0.7482	0.0321	0.7463	0.0321	0.0134	4.30%	0.0211	4.18%
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.7540							
132.99	Phenylalanine, Miscellaneous (%)	1	1	0.7325							
133.00	Proline, Post-col Ninhydrin Der (%)	13	12	1.044	0.0536	1.044	0.0607	0.0219	5.82%	0.0085	3.97%
133.05	Proline, Pre-col AQC Der (%)	9	9	1.046	0.0430	1.047	0.0469	0.0195	4.48%	0.0194	3.97%
133.99	Proline, Miscellaneous (%)	1	1	1.180							
134.00	Serine, Post-col Ninhydrin Der (%)	13	13	0.7802	0.0334	0.7848	0.0206	0.0072	2.63%	0.0118	4.15%
134.05	Serine, Pre-col AQC Der (%)	9	9	0.8131	0.0198	0.8131	0.0224	0.0094	2.76%	0.0185	4.13%
134.02	Serine, Post-col OPA Der (%)	1	1	0.7050							
134.99	Serine, Miscellaneous (%)	1	1	0.8450							
135.00	Threonine, Post-col Ninhydrin Der (%)	13	13	0.5934	0.0126	0.5935	0.0139	0.0048	2.34%	0.0100	4.33%

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135.05	Threonine, Pre-col AQC Der (%)	9	9	0.6056	0.0240	0.6074	0.0230	0.0096	3.78%	0.0212	4.31%
135.02	Threonine, Post-col OPA Der (%)	1	1	0.5540							
135.99	Threonine, Miscellaneous (%)	1	1	0.6175							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	8	8	0.2288	0.0100	0.2288	0.0114	0.0050	4.96%	0.0028	4.99%
136.05	Tryptophan, Pre-col AQC Der (%)	6	6	0.1876	0.0329	0.1876	0.0373	0.0190	19.86%	0.0070	5.15%
136.99	Tryptophan, Miscellaneous (%)	3	3	0.2928	0.1903	0.2928	0.1903	0.1099	64.98%	0.0075	4.81%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	2	2	0.2076	0.0260						
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.2093	0.0131						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.1992							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	11	11	0.5289	0.0361	0.5289	0.0410	0.0154	7.74%	0.0126	4.40%
137.05	Tyrosine, Pre-col AQC Der (%)	9	9	0.5282	0.0428	0.5315	0.0405	0.0169	7.63%	0.0198	4.40%
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.4625							
137.99	Tyrosine, Miscellaneous (%)	1	1	0.5075							
138.00	Valine, Post-col Ninhydrin Der (%)	13	12	0.7668	0.0395	0.7655	0.0419	0.0151	5.48%	0.0103	4.16%
138.05	Valine, Pre-col AQC Der (%)	9	9	0.7564	0.0774	0.7564	0.0878	0.0366	11.61%	0.0234	4.17%
138.02	Valine, Post-col OPA Der (%)	1	1	0.8185							
138.99	Valine, Miscellaneous (%)	1	1	0.7725							
139.00	Taurine, Post-col Ninhydrin Der (%)	1	1	0.1950							
139.05	Taurine, Pre-col AQC Der (%)	2	1	0.1920							
139.99	Taurine, Miscellaneous (%)	1	1	0.0300							
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
160.10	Fructose, HPAEC PAD (%)	2	2	0.2650	0.0354						
161.10	Galactose, HPAEC PAD (%)	1		0.0000							
162.10	Glucose, HPAEC PAD (%)	2	2	0.2500	0.0354						
163.10	Lactose, HPAEC PAD (%)	1		0.0000							
164.10	Maltose, HPAEC PAD (%)	2	2	0.3075	0.0248						
165.10	Sucrose, HPAEC PAD (%)	2	2	2.625	0.2970						
166.10	Raffinose, HPAEC PAD (%)	2	2	0.6125	0.0248						
167.10	Stachyose, HPAEC PAD (%)	2	2	1.535	1.711						
354.04	Decoquinate, LC-MS/MS (ppm)	1		0.2500							
361.02	Lasalocid Sodium, LC (ppm)	7	7	32.44	2.588	32.44	2.935	1.386	9.05%	1.112	9.48%
361.03	Lasalocid Sodium, LC (UV or FL) (ppm)	7	6	30.31	1.920	30.31	2.177	1.111	7.18%	0.5681	9.57%
361.05	Lasalocid Sodium, LC-MS/MS (ppm)	4	4	38.00	14.22	38.00	14.22	7.109	37.41%	2.900	9.25%
361.04	Lasalocid Sodium, LC-MS (ppm)	1	1	29.87							
365.05	Monensin, LC-MS/MS (ppm)	1		0.2500							
379.05	Salinomycin, LC-MS/MS (ppm)	1		0.2500							
388.05	Tylosin, LC-MS/MS (ppm)	2	2	132.3	37.13						
388.00	Tylosin, Plate (ppm)	1	1	144.2							
391.03	Narasin, LC-MS/MS (ppm)	1		0.2500							
400.01	Water Activity, Aqualab chilled mirror (Units)	11	11	0.5976	0.0137	0.5976	0.0156	0.0059	2.61%	0.0081	

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400.99	Water Activity, Miscellaneous (Units)	4	3	0.5917	0.0023	0.5917	0.0023	0.0016	0.39%	0.0080	
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	3	2	0.0656	0.0150	0.0656	0.0150			0.0062	22.00%
516.00	Arsenic, Total (As), AA, Hydride (ppm)	1	1	0.0670							
516.52	Arsenic, Total (As), ICP-MS, Open vessel (ppm)	1	1	0.0621							
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	1		20.00							
518.41	Cadmium, ICP, Dry ash (ppm)	2	2	0.0812	0.0026						
518.43	Cadmium, ICP, Microwave (ppm)	2	2	0.0797	0.0278						
518.53	Cadmium, ICP-MS, Microwave (ppm)	2	2	0.0697	0.0200						
518.33	Cadmium, AAS, Microwave (ppm)	1	1	0.0850							
518.52	Cadmium, ICP-MS, Open vessel (ppm)	1	1	0.0856							
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	5	4	2.221	0.8182	2.221	0.8182	0.4091	36.84%	0.0100	14.19%
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	3	3	1.599	0.8229	1.599	0.8229	0.4751	51.46%	0.1325	14.91%
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	2	2	1.435	0.0396						
520.42	Chromium, Total (Cr), ICP, Open vessel (ppm)	2	2	1.750	0.2475						
520.52	Chromium, Total (Cr), ICP-MS, Open vessel (ppm)	1	1	0.7188							
526.53	Lead, ICP-MS, Microwave (ppm)	3	3	0.0839	0.0318	0.0839	0.0318	0.0184	37.94%	0.0196	22.00%
526.43	Lead, ICP, Microwave (ppm)	2	2	0.3618	0.1248						
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.1660							
526.52	Lead, ICP-MS, Open vessel (ppm)	1	1	0.0805							
529.99	Mercury, Miscellaneous (ppb)	3	2	0.3179	0.1161	0.3179	0.1161				22.00%
539.43	Nickel, ICP, Microwave (ppm)	4	3	7.158	6.194	7.158	6.194	4.380	86.53%		11.90%
539.53	Nickel, ICP-MS, Microwave (ppm)	2	2	2.144	0.0441						
539.41	Nickel, ICP, Dry ash (ppm)	1	1	1.811							
539.52	Nickel, ICP-MS, Open vessel (ppm)	1	1	1.487							
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1		0.0100							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	1		0.0100							
706.99	Caprylic acid (8:0), Miscellaneous (%) (w/w))	1		0.0100							
708.99	Capric acid (10:0), Miscellaneous (%) (w/w))	1		0.0100							
710.99	Lauric Acid (12:0), Miscellaneous (%) (w/w))	2		0.0050							
714.99	Myristic Acid (14:0), Miscellaneous (%) (w/w))	2	2	0.0097	0.0056						
716.99	Palmitic Acid (16:0), Miscellaneous (%) (w/w))	2	2	0.6195	0.0050						
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (%) (w/w))	2	2	0.0118	0.0020						
720.99	Margaric acid (17:0), Miscellaneous (%) (w/w))	1	1	0.0063							
722.99	Stearic Acid (18:0), Miscellaneous (%) (w/w))	1	1	0.0948							
724.99	Oleic Acid (9c-18:1), Miscellaneous (%) (w/w))	2	2	0.9750	0.1444						
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (%) (w/w))	2	2	2.251	0.3495						
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (%) (w/w))	2	2	0.1633	0.0172						
730.99	Arachidic Acid (20:0), Miscellaneous (%) (w/w))	2	2	0.0161	0.0045						
732.99	Gondoic Acid (11c-20:1), Miscellaneous (%) (w/w))	2	2	0.0200	0.0021						
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (%) (w/w))	1		0.0100							

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740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (% (w/w	2		0.0050							
742.99	Behenic Acid (22:0), Miscellaneous (% (w/w))	2	2	0.0119	0.0041						
744.99	Erucic Acid (13c-22:1), Miscellaneous (% (w/w))	2		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))	2	2	0.0169	0.0077						
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))	2		0.0050							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (% (w/w))	1	1	0.1750							
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (% (w/w))	1		0.0100							
758.99	Total Saturated Fatty Acids, Miscellaneous (% (w/w))	1	1	0.8365							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	1.109							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (% (w/w))	1	1	2.680							
772.99	Total Fatty Acids, Miscellaneous (% (w/w))	1	1	3.809							

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

Lamb Feed, Medicated

Test Material Code # 202525

Method Precision Report

Methods Reported: 134

Labs Reporting: 155

Issue Date : 06/30/2025

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 (%)	41	37	10.67	0.2390	0.1784	0.1155	0.2125	1.68%	1.09%	2.00%	1.840
001.99	Loss on Drying, Miscellaneous (%)	17	14	10.43	1.490	0.5853	0.1110	0.5957	5.43%	1.03%	5.52%	5.369
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	12	17.74	0.2040	0.1398	0.0496	0.1484	0.79%	0.28%	0.83%	2.990
002.05	Protein, Crude, Copper, Boric Acid (%)	20	19	17.80	0.2535	0.2364	0.1385	0.2739	1.33%	0.78%	1.54%	1.978
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	103	97	18.03	0.3636	0.2493	0.1681	0.3007	1.39%	0.93%	1.67%	1.789
002.11	Protein, Crude, NIR (%)	7	7	17.75	1.205	1.203	0.0965	1.207	6.78%	0.54%	6.80%	12.51
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	9	3.500	0.3037	0.3127	0.0295	0.3141	8.88%	0.84%	8.92%	10.65
003.06	Fat, Crude, Pet Ether (%)	18	18	3.557	0.2248	0.2175	0.0803	0.2319	6.11%	2.26%	6.52%	2.888
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	6	3.652	0.4070	0.1024	0.0746	0.1267	2.88%	2.09%	3.56%	1.698
003.10	Fat, Crude, Randall, Pet Ether (%)	29	26	3.407	0.2630	0.1973	0.0722	0.2101	5.84%	2.14%	6.21%	2.908
003.11	Fat, Crude, NIR (%)	7	7	3.568	0.3614	0.3572	0.0776	0.3655	10.01%	2.17%	10.25%	4.712
003.14	Fat, Crude, Ankom (%)	48	43	3.486	0.4153	0.2728	0.0755	0.2831	7.71%	2.14%	8.00%	3.747
004.00	Fiber, Crude, Asbestos Free (%)	5	5	10.56	0.2745	0.2548	0.1444	0.2929	2.41%	1.37%	2.77%	2.028
004.06	Fiber, Crude, Fibertec (%)	16	15	10.70	0.7776	0.4810	0.1735	0.5113	4.43%	1.60%	4.71%	2.947
004.07	Fiber, Crude, ANKOM (%)	73	66	10.94	1.230	0.6004	0.1893	0.6296	5.54%	1.75%	5.81%	3.325
004.11	Fiber, Crude, NIR (%)	6	6	10.29	0.3356	0.3322	0.0671	0.3389	3.23%	0.65%	3.29%	5.047
005.00	Ash, 2h @ 600°C (%)	84	75	7.709	0.5119	0.2936	0.0949	0.3085	3.84%	1.24%	4.04%	3.251
005.05	Ash, 3h @ 550°C (%)	24	22	7.944	0.2353	0.2310	0.0712	0.2417	2.91%	0.90%	3.05%	3.395
005.11	Ash, NIR (%)	6	6	7.565	1.755	1.751	0.1548	1.758	23.15%	2.05%	23.24%	11.36
005.99	Ash, Miscellaneous (%)	8	7	7.903	0.3842	0.1660	0.1097	0.1990	2.07%	1.37%	2.48%	1.814
008.02	Fiber, Acid Detergent, Crucible (%)	11	11	15.21	0.5412	0.5171	0.2258	0.5643	3.40%	1.49%	3.71%	2.499
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	41	40	14.55	0.8411	0.7995	0.2872	0.8495	5.48%	1.97%	5.83%	2.958
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	10	10	28.91	2.331	2.312	0.4291	2.351	8.00%	1.48%	8.13%	5.479
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	37	33	28.94	1.314	0.8023	0.2323	0.8353	2.80%	0.81%	2.91%	3.595
010.11	Moisture, NIR (%)	6	6	10.38	0.8685	0.8682	0.0337	0.8688	8.37%	0.32%	8.37%	25.78
010.99	Moisture, Miscellaneous (%)	18	15	10.56	0.7646	0.4921	0.0654	0.4964	4.60%	0.61%	4.64%	7.586
011.01	Loss on Drying, HT, 135°C 2hr (%)	61	57	11.47	0.4639	0.3726	0.0791	0.3809	3.24%	0.69%	3.31%	4.816
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	5	5	10.94	0.4251	0.4183	0.1076	0.4319	3.82%	0.98%	3.95%	4.014

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
012.00	Starch, Polarimetric (Ewers) (%)	12	12	20.99	0.6680	0.6379	0.2806	0.6968	3.04%	1.34%	3.32%	2.484
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	8	8	18.38	0.9533	0.8789	0.5222	1.022	4.78%	2.84%	5.56%	1.958
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	9	9	18.53	0.7034	0.6288	0.4458	0.7708	3.39%	2.41%	4.16%	1.729
013.00	Fat, Pretreat, Acid hydrolysis (%)	18	17	4.310	0.6427	0.4446	0.1711	0.4763	10.06%	3.87%	10.78%	2.784
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	14	13	4.940	0.4887	0.4791	0.2345	0.5334	9.68%	4.74%	10.77%	2.274
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	6	5	4.282	0.3139	0.3135	0.0208	0.3142	7.32%	0.49%	7.34%	15.08
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	10	9	4.335	0.5684	0.4310	0.1492	0.4561	10.23%	3.54%	10.83%	3.057
019.08	Calcium, EDTA (%)	9	9	1.484	0.0301	0.0241	0.0257	0.0352	1.62%	1.73%	2.37%	1.370
019.31	Calcium, AAS, Dry ash (%)	16	14	1.458	0.0974	0.0683	0.0415	0.0799	4.75%	2.89%	5.56%	1.926
019.41	Calcium, ICP, Dry ash (%)	17	16	1.479	0.0598	0.0553	0.0324	0.0641	3.73%	2.19%	4.33%	1.977
019.42	Calcium, ICP, Open vessel (%)	17	17	1.500	0.0782	0.0719	0.0435	0.0840	4.80%	2.90%	5.60%	1.934
019.43	Calcium, ICP, Microwave (%)	33	30	1.438	0.1036	0.0722	0.0437	0.0844	5.01%	3.03%	5.85%	1.932
019.53	Calcium, ICP-MS, Microwave (%)	6	5	1.273	0.6067	0.2448	0.0469	0.2493	16.28%	3.12%	16.58%	5.315
021.43	Cobalt, ICP, Microwave (ppm)	13	11	0.7113	0.2210	0.2194	0.0368	0.2225	30.85%	5.17%	31.28%	6.053
022.31	Copper, AAS, Dry ash (ppm)	7	5	9.204	1.048	1.144	0.3353	1.192	12.47%	3.65%	13.00%	3.557
022.41	Copper, ICP, Dry ash (ppm)	9	9	8.486	2.804	2.704	1.052	2.901	31.86%	12.39%	34.18%	2.758
022.42	Copper, ICP, Open vessel (ppm)	17	16	8.551	0.8913	0.8434	0.4079	0.9369	9.86%	4.77%	10.96%	2.297
022.43	Copper, ICP, Microwave (ppm)	22	20	8.450	0.8146	0.7889	0.1905	0.8115	9.28%	2.24%	9.55%	4.260
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	8.095	0.7933	0.7893	0.1136	0.7974	9.75%	1.40%	9.85%	7.017
025.31	Iron, AAS, Dry ash (ppm)	9	7	181.6	11.80	11.21	2.259	11.44	6.11%	1.23%	6.23%	5.065
025.41	Iron, ICP, Dry ash (ppm)	14	14	184.5	14.04	13.34	6.209	14.71	7.23%	3.37%	7.98%	2.370
025.42	Iron, ICP, Open vessel (ppm)	16	16	177.5	11.00	9.856	6.898	12.03	5.55%	3.89%	6.78%	1.744
025.43	Iron, ICP, Microwave (ppm)	26	25	183.0	11.37	11.05	3.801	11.68	6.04%	2.08%	6.38%	3.074
025.53	Iron, ICP-MS, Microwave (ppm)	6	6	173.9	33.96	33.90	2.910	34.02	19.49%	1.67%	19.56%	11.69
027.31	Magnesium, AAS, Dry ash (%)	9	8	0.2830	0.0178	0.0179	0.0067	0.0191	6.36%	2.38%	6.79%	2.853
027.41	Magnesium, ICP, Dry ash (%)	15	14	0.2773	0.0098	0.0085	0.0078	0.0115	3.06%	2.79%	4.15%	1.484
027.42	Magnesium, ICP, Open vessel (%)	17	16	0.2846	0.0138	0.0131	0.0059	0.0144	4.62%	2.06%	5.06%	2.460
027.43	Magnesium, ICP, Microwave (%)	29	27	0.2775	0.0154	0.0109	0.0085	0.0138	3.90%	3.04%	4.95%	1.626
027.53	Magnesium, ICP-MS, Microwave (%)	6	5	0.2422	0.1112	0.0247	0.0096	0.0265	8.64%	3.35%	9.26%	2.767
028.31	Manganese, AAS, Dry ash (ppm)	11	10	80.84	3.369	3.225	1.380	3.508	3.99%	1.71%	4.34%	2.542
028.41	Manganese, ICP, Dry ash (ppm)	12	12	79.12	2.720	2.512	1.475	2.913	3.17%	1.86%	3.68%	1.974
028.42	Manganese, ICP, Open vessel (ppm)	17	16	82.09	5.055	4.598	2.972	5.475	5.60%	3.62%	6.67%	1.842
028.43	Manganese, ICP, Microwave (ppm)	28	24	83.26	8.505	5.016	2.047	5.418	6.14%	2.51%	6.63%	2.647
028.53	Manganese, ICP-MS, Microwave (ppm)	6	5	81.17	6.922	6.714	2.380	7.124	8.27%	2.93%	8.78%	2.993
031.01	Phosphorus, Photometric (%)	28	24	0.5801	0.0464	0.0346	0.0076	0.0354	6.00%	1.31%	6.14%	4.682
031.41	Phosphorus, ICP, Dry ash (%)	16	16	0.5701	0.0243	0.0228	0.0118	0.0257	4.00%	2.08%	4.51%	2.170
031.42	Phosphorus, ICP, Open vessel (%)	18	18	0.5753	0.0326	0.0308	0.0153	0.0344	5.35%	2.67%	5.98%	2.241
031.43	Phosphorus, ICP, Microwave (%)	33	30	0.5718	0.0246	0.0205	0.0108	0.0232	3.57%	1.88%	4.04%	2.143

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
031.53	Phosphorus, ICP-MS, Microwave (%)	6	5	0.4897	0.2284	0.0557	0.0128	0.0571	9.59%	2.20%	9.84%	4.480
032.31	Potassium, AAS, Dry ash (%)	6	5	0.9825	0.1073	0.1197	0.0057	0.1198	12.15%	0.58%	12.16%	20.86
032.41	Potassium, ICP, Dry ash (%)	14	13	1.016	0.0605	0.0591	0.0265	0.0648	5.80%	2.61%	6.36%	2.440
032.42	Potassium, ICP, Open vessel (%)	17	16	1.055	0.0696	0.0671	0.0262	0.0720	6.36%	2.48%	6.83%	2.749
032.43	Potassium, ICP, Microwave (%)	30	26	1.050	0.0843	0.0457	0.0168	0.0487	4.42%	1.63%	4.71%	2.891
032.53	Potassium, ICP-MS, Microwave (%)	6	5	0.8759	0.4001	0.0982	0.0298	0.1026	9.48%	2.87%	9.91%	3.448
032.99	Potassium, Miscellaneous (%)	5	5	1.007	0.0401	0.0396	0.0085	0.0405	3.94%	0.85%	4.03%	4.760
033.00	Salt as chloride, Sol Cl (%)	10	8	1.562	0.2610	0.0607	0.0225	0.0647	3.73%	1.38%	3.98%	2.882
033.01	Salt as chloride, Poten Cl (%)	24	20	1.589	0.2278	0.0228	0.0118	0.0257	1.37%	0.71%	1.55%	2.171
033.03	Salt as chloride, Quantab (%)	5	5	0.8726	0.7311	0.7296	0.0674	0.7327	83.61%	7.72%	83.97%	10.87
033.99	Salt, Miscellaneous (%)	8	8	1.380	0.1985	0.1975	0.0280	0.1995	14.31%	2.03%	14.46%	7.117
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	7	6	0.9135	0.2121	0.1009	0.0371	0.1076	11.99%	4.41%	12.78%	2.895
035.31	Sodium, AAS, Dry ash (%)	6	5	0.6214	0.3946	0.0293	0.0073	0.0302	6.37%	1.58%	6.56%	4.149
035.41	Sodium, ICP, Dry ash (%)	14	12	0.4754	0.0225	0.0149	0.0085	0.0171	3.16%	1.80%	3.64%	2.023
035.42	Sodium, ICP, Open vessel (%)	17	17	0.4906	0.0336	0.0303	0.0204	0.0365	6.18%	4.16%	7.45%	1.792
035.43	Sodium, ICP, Microwave (%)	22	21	0.4799	0.0185	0.0175	0.0087	0.0195	3.64%	1.82%	4.07%	2.235
036.42	Sulfur, ICP, Open vessel (%)	14	14	0.3234	0.0215	0.0207	0.0078	0.0222	6.41%	2.41%	6.85%	2.844
036.43	Sulfur, ICP, Microwave (%)	13	12	0.3351	0.0146	0.0086	0.0072	0.0112	2.54%	2.13%	3.32%	1.556
037.31	Zinc, AAS, Dry ash (ppm)	9	9	126.6	8.192	7.613	4.275	8.731	6.01%	3.38%	6.90%	2.043
037.41	Zinc, ICP, Dry ash (ppm)	14	12	125.2	7.875	8.051	2.324	8.379	6.43%	1.85%	6.69%	3.606
037.42	Zinc, ICP, Open vessel (ppm)	17	16	123.0	11.41	11.33	4.372	12.14	9.20%	3.55%	9.86%	2.778
037.43	Zinc, ICP, Microwave (ppm)	28	26	126.4	12.22	12.02	3.099	12.41	9.51%	2.45%	9.82%	4.005
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	121.4	12.48	12.31	2.883	12.64	10.14%	2.38%	10.41%	4.384
038.42	Molybdenum, ICP, Open vessel (ppm)	6	5	2.816	0.6526	0.6462	0.2482	0.6922	23.85%	9.16%	25.54%	2.789
038.43	Molybdenum, ICP, Microwave (ppm)	12	11	2.799	0.5151	0.2246	0.1972	0.2989	8.41%	7.39%	11.20%	1.515
038.53	Molybdenum, ICP-MS, Microwave (ppm)	5	5	2.879	0.6865	0.6035	0.4629	0.7606	20.96%	16.08%	26.41%	1.643
042.00	Chloride, Titrimetric (%)	7	7	1.015	0.0253	0.0237	0.0122	0.0267	2.34%	1.20%	2.63%	2.184
106.02	Vitamin A, LC (KU / kg)	8	6	1,954	5,120	5.530	2.835	6.214	29.89%	15.32%	33.59%	2.192
109.02	Vitamin E, LC (IU / kg)	7	7	75.78	22.78	22.31	6.518	23.24	29.44%	8.60%	30.67%	3.565
120.00	Alanine, Post-col Ninhydrin Der (%)	13	12	0.8862	0.0195	0.0193	0.0086	0.0211	2.18%	0.97%	2.38%	2.448
120.05	Alanine, Pre-col AQC Der (%)	9	9	0.8816	0.0402	0.0399	0.0063	0.0404	4.53%	0.72%	4.58%	6.408
121.00	Arginine, Post-col Ninhydrin Der (%)	13	11	1.043	0.0272	0.0280	0.0067	0.0288	2.68%	0.64%	2.76%	4.315
121.05	Arginine, Pre-col AQC Der (%)	9	8	1.060	0.0620	0.0616	0.0098	0.0623	5.81%	0.93%	5.88%	6.343
122.00	Aspartic, Post-col Ninhydrin Der (%)	13	12	1.429	0.0285	0.0285	0.0114	0.0307	1.99%	0.80%	2.15%	2.680
122.05	Aspartic, Pre-col AQC Der (%)	9	9	1.446	0.0916	0.0897	0.0260	0.0934	6.20%	1.80%	6.46%	3.588
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	13	13	0.2951	0.0127	0.0125	0.0035	0.0130	4.24%	1.17%	4.40%	3.744
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	9	9	0.2833	0.0474	0.0470	0.0090	0.0478	16.59%	3.17%	16.89%	5.335
125.00	Glutamic, Post-col Ninhydrin Der (%)	13	12	2.943	0.0808	0.0550	0.0253	0.0605	1.88%	0.86%	2.07%	2.393

Test Material Code # 202525

Issue Date : 06/30/2025

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
125.05	Glutamic, Pre-col AQC Der (%)	9	9	2.960	0.1180	0.1132	0.0472	0.1227	3.83%	1.59%	4.14%	2.601
126.00	Glycine, Post-col Ninhydrin Der (%)	13	13	0.8577	0.0134	0.0117	0.0093	0.0149	1.36%	1.08%	1.74%	1.607
126.05	Glycine, Pre-col AQC Der (%)	9	8	0.8484	0.0356	0.0370	0.0051	0.0374	4.35%	0.60%	4.39%	7.280
127.00	Histidine, Post-col Ninhydrin Der (%)	13	12	0.4336	0.0170	0.0127	0.0039	0.0132	2.94%	0.91%	3.08%	3.396
127.05	Histidine, Pre-col AQC Der (%)	9	9	0.4280	0.0263	0.0259	0.0059	0.0266	6.06%	1.39%	6.22%	4.478
128.00	Isoleucine, Post-col Ninhydrin Der (%)	13	13	0.6027	0.0273	0.0268	0.0072	0.0277	4.44%	1.20%	4.60%	3.826
128.05	Isoleucine, Pre-col AQC Der (%)	9	9	0.6040	0.0587	0.0571	0.0188	0.0602	9.46%	3.12%	9.96%	3.196
129.00	Leucine, Post-col Ninhydrin Der (%)	13	12	1.306	0.0233	0.0133	0.0164	0.0211	1.02%	1.26%	1.62%	1.285
129.05	Leucine, Pre-col AQC Der (%)	9	8	1.275	0.0666	0.0627	0.0213	0.0662	4.88%	1.66%	5.16%	3.108
130.00	L-Lysine, Post-col Ninhydrin Der (%)	15	12	0.7897	0.0268	0.0251	0.0028	0.0252	3.19%	0.35%	3.21%	9.062
130.05	L-Lysine, Pre-col AQC Der (%)	9	9	0.7870	0.0660	0.0647	0.0186	0.0673	8.22%	2.37%	8.56%	3.611
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	13	13	0.2550	0.0149	0.0146	0.0037	0.0151	5.74%	1.47%	5.92%	4.031
131.05	Methionine, PAO Pre-col AQC Der (%)	9	8	0.2580	0.0245	0.0098	0.0118	0.0153	3.91%	4.70%	6.12%	1.301
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	13	12	0.7538	0.0331	0.0333	0.0078	0.0342	4.40%	1.04%	4.52%	4.358
132.05	Phenylalanine, Pre-col AQC Der (%)	9	9	0.7482	0.0321	0.0302	0.0156	0.0339	4.03%	2.08%	4.54%	2.181
133.00	Proline, Post-col Ninhydrin Der (%)	13	12	1.044	0.0536	0.0534	0.0068	0.0538	5.12%	0.65%	5.16%	7.949
133.05	Proline, Pre-col AQC Der (%)	9	9	1.046	0.0430	0.0417	0.0147	0.0442	3.99%	1.41%	4.23%	3.005
134.00	Serine, Post-col Ninhydrin Der (%)	13	12	0.7802	0.0334	0.0170	0.0084	0.0189	2.15%	1.06%	2.40%	2.256
134.05	Serine, Pre-col AQC Der (%)	9	9	0.8131	0.0198	0.0178	0.0122	0.0216	2.19%	1.50%	2.65%	1.774
135.00	Threonine, Post-col Ninhydrin Der (%)	13	12	0.5934	0.0126	0.0119	0.0077	0.0142	2.00%	1.30%	2.39%	1.832
135.05	Threonine, Pre-col AQC Der (%)	9	8	0.6056	0.0240	0.0244	0.0109	0.0267	4.02%	1.80%	4.40%	2.442
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	8	7	0.2288	0.0100	0.0081	0.0014	0.0083	3.59%	0.63%	3.64%	5.751
136.05	Tryptophan, Pre-col AQC Der (%)	6	6	0.1876	0.0329	0.0327	0.0048	0.0330	17.42%	2.55%	17.61%	6.906
137.00	Tyrosine, Post-col Ninhydrin Der (%)	11	11	0.5289	0.0361	0.0351	0.0122	0.0371	6.63%	2.30%	7.02%	3.051
137.05	Tyrosine, Pre-col AQC Der (%)	9	8	0.5282	0.0428	0.0448	0.0094	0.0458	8.51%	1.79%	8.70%	4.853
138.00	Valine, Post-col Ninhydrin Der (%)	13	11	0.7668	0.0395	0.0378	0.0086	0.0388	4.96%	1.13%	5.09%	4.504
138.05	Valine, Pre-col AQC Der (%)	9	8	0.7564	0.0774	0.0687	0.0112	0.0696	9.25%	1.50%	9.37%	6.236
361.02	Lasalocid Sodium, LC (ppm)	7	7	32.44	2.588	2.516	0.8578	2.658	7.76%	2.64%	8.19%	3.098
361.03	Lasalocid Sodium, LC (UV or FL) (ppm)	7	6	30.31	1.920	1.886	0.5034	1.952	6.22%	1.66%	6.44%	3.878
400.01	Water Activity, Aqualab chilled mirror (Units)	11	11	0.5976	0.0137	0.0121	0.0091	0.0152	2.03%	1.52%	2.54%	1.668

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