



AAFCO
Association of American Feed Control Officials



Animal Feed Scheme

Calf Starter, Medicated

Test Material Code # 202523

Method Summary Report

(Precision Report Follows)

Labs Reporting: 165

Methods Reported: 384

Issue Date : 04/30/2025

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 (%)	45	43	7.982	0.4586	8.053	0.2945	0.0561	3.66%	0.1078	2.92%
001.99	Loss on Drying, Miscellaneous (%)	17	15	8.012	0.9218	7.884	0.3682	0.1188	4.67%	0.1033	2.93%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	4	4	8.267	0.6831	8.267	0.6831	0.3416	8.26%	0.0576	2.91%
001.03	Loss on Drying, Low temp. methods (%)	2	2	8.183	0.0318						
001.05	Loss on Drying, LECO (%)	1	1	7.710							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	111	109	18.11	0.5454	18.06	0.3101	0.0371	1.72%	0.1934	2.35%
002.05	Protein, Crude, Copper, Boric Acid (%)	21	21	17.76	0.2926	17.76	0.2545	0.0694	1.43%	0.1392	2.37%
002.01	Protein, Crude, Auto Kjell-Foss (%)	15	15	17.80	0.1691	17.78	0.1516	0.0489	0.85%	0.0921	2.37%
002.11	Protein, Crude, NIR (%)	6	6	18.53	1.661	18.30	0.2255	0.1151	1.23%	0.3383	2.34%
002.04	Protein, Crude, Copper Catalyst (%)	2	2	17.88	0.0566						
002.08	Protein, Crude, Cu/Ti (%)	2	2	17.61	0.0774						
002.00	Protein, Crude, Crude (%)	1	1	16.47							
002.02	Protein, Crude, Semiauto Autoanalyzer (%)	1	1	17.86							
002.10	Protein, Crude, Block dig/distillation (%)	1	1	17.85							
003.14	Fat, Crude, Ankom (%)	56	54	3.971	0.3983	3.948	0.3041	0.0517	7.70%	0.1143	3.25%
003.10	Fat, Crude, Randall, Pet Ether (%)	28	27	3.776	0.2912	3.732	0.2164	0.0521	5.80%	0.0653	3.28%
003.06	Fat, Crude, Pet Ether (%)	17	17	3.887	0.2386	3.867	0.2056	0.0623	5.32%	0.0907	3.26%
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	10	3.933	0.2768	3.925	0.2956	0.1169	7.53%	0.0357	3.26%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	8	3.889	0.3716	3.943	0.2817	0.1245	7.14%	0.1017	3.25%
003.11	Fat, Crude, NIR (%)	6	6	4.215	0.8837	4.138	0.8174	0.4171	19.75%	0.2600	3.23%
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	3	3	4.177	0.1068	4.177	0.1068			0.3410	3.23%
003.13	Fat, Crude, Randall, Hexane Ext. (%)	3	3	3.877	0.0912	3.877	0.0912	0.0526	2.35%	0.1333	3.26%
003.99	Fat, Crude, Miscellaneous (%)	3	3	4.578	1.839	4.578	1.839	1.062	40.16%	0.1100	3.18%
003.12	Fat, Crude, Hexane Ext (%)	2	2	3.965	0.0000						
004.07	Fiber, Crude, ANKOM (%)	76	75	14.12	0.6247	14.09	0.5909	0.0853	4.19%	0.2520	2.66%
004.06	Fiber, Crude, Fibertec (%)	17	17	14.11	0.8355	14.06	0.8035	0.2436	5.71%	0.2744	2.67%
004.00	Fiber, Crude, Asbestos Free (%)	6	6	13.96	0.5818	13.96	0.6598	0.3367	4.73%	0.2200	2.68%
004.11	Fiber, Crude, NIR (%)	5	5	13.13	1.205	13.13	1.205	0.5389	9.18%	0.3240	2.71%
004.99	Fiber, Crude, Miscellaneous (%)	3	3	14.06	0.3790	14.06	0.3790	0.2188	2.70%	0.2713	2.67%

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
004.03	Fiber, Crude, Fritted Glass (%)	2	2	14.49	0.7283						
005.00	Ash, 2h @ 600°C (%)	89	87	6.511	0.2381	6.501	0.2183	0.0293	3.36%	0.0771	3.02%
005.05	Ash, 3h @ 550°C (%)	23	23	6.818	0.2416	6.801	0.1879	0.0490	2.76%	0.0531	3.00%
005.99	Ash, Miscellaneous (%)	7	7	6.776	0.3478	6.776	0.3944	0.1864	5.82%	0.0848	3.00%
005.11	Ash, NIR (%)	5	5	7.240	1.813	7.240	1.813	0.8109	25.05%	0.5250	2.97%
005.03	Ash, Microwave furnace (%)	2	2	6.360	0.2970						
005.02	Ash, LECO (%)	1	1	7.150							
006.99	Total Sugars, Miscellaneous (%)	5	5	4.912	1.351	4.912	1.351	0.6042	27.50%	0.2040	3.15%
006.00	Total Sugars, As sucrose (%)	2	2	4.799	0.4229						
006.01	Total Sugars, Mod. Fehling Soln (%)	1	1	4.960							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	44	44	19.73	1.204	19.75	1.290	0.2431	6.53%	0.3300	2.25%
008.02	Fiber, Acid Detergent, Crucible (%)	10	10	20.05	0.8328	19.99	0.6637	0.2623	3.32%	0.2857	2.24%
008.99	Fiber, Acid Detergent, Miscellaneous (%)	4	4	20.63	1.240	20.63	1.240	0.6199	6.01%	0.5013	2.20%
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	40	39	34.26	1.028	34.19	1.015	0.2031	2.97%	0.3372	1.71%
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	9	9	35.02	1.165	35.02	1.321	0.5505	3.77%	0.3365	1.69%
009.99	Fiber, Neutral Detergent, Miscellaneous (%)	2	2	35.76	3.408						
010.99	Moisture, Miscellaneous (%)	17	17	7.904	1.092	8.078	0.6236	0.1891	7.72%	0.0592	2.92%
010.11	Moisture, NIR (%)	5	5	8.166	0.8365	8.166	0.8365	0.3741	10.24%	0.1450	2.92%
010.03	Moisture, Karl-Fischer (%)	2	2	8.073	0.4349						
011.01	Loss on Drying, HT, 135°C 2hr (%)	62	60	9.082	0.3957	9.103	0.3791	0.0612	4.16%	0.1053	2.87%
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	6	6	8.948	0.8464	8.948	0.9598	0.4898	10.73%	0.1235	2.88%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	1	1	8.700							
012.00	Starch, Polarimetric (Ewers) (%)	13	13	14.18	0.6561	14.16	0.5776	0.2003	4.08%	0.2550	2.66%
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	10	11.73	0.9231	11.92	0.5807	0.2295	4.87%	0.3718	2.75%
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	9	9	12.79	1.212	12.79	1.374	0.5726	10.75%	0.6024	2.73%
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	12.51	0.3424						
012.11	Starch, NIR (%)	2	2	15.32	1.584						
012.20	Starch, Dietary, Enzymatic-Colorimetric (%)	1	1	12.65							
012.99	Starch, Miscellaneous (%)	1	1	12.35							
013.00	Fat, Pretreat, Acid hydrolysis (%)	17	17	4.886	0.4791	4.906	0.4952	0.1501	10.09%	0.2465	3.15%
013.02	Fat, Pretreat, Mojonniier, Bak Ext, Acid hydrolysis (%)	16	15	5.407	0.4867	5.407	0.5519	0.1781	10.21%	0.1415	3.10%
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	9	8	4.758	0.3680	4.758	0.4173	0.1844	8.77%	0.0831	3.16%
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	6	6	4.527	0.4637	4.543	0.4891	0.2496	10.77%	0.3122	3.18%
013.08	Fat, Pretreat, Roese-Gottlieb Modified, Alkaline Hydrolysis (%)	1	1	2.585							
013.99	Fat, Pretreat, Miscellaneous (%)	1	1	3.875							
014.01	Fiber, Total Dietary, Enz-Grav (%)	2	2	39.58	1.099						
015.43	Aluminum, ICP, Microwave (ppm)	7	7	62.29	26.63	58.86	21.69	10.25	36.85%	2.590	8.66%
015.41	Aluminum, ICP, Dry ash (ppm)	4	4	57.05	14.16	57.05	14.16	7.081	24.82%	3.703	8.70%
015.53	Aluminum, ICP-MS, Microwave (ppm)	3	3	61.44	3.032	61.44	3.032	1.750	4.93%	1.270	8.61%
015.42	Aluminum, ICP, Open vessel (ppm)	2	2	97.85	107.1						

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
015.99	Aluminum, Miscellaneous (ppm)	1	1	33.85							
017.43	Boron, ICP, Microwave (ppm)	7	7	10.53	4.192	10.13	3.176	1.501	31.34%	0.3453	11.29%
017.41	Boron, ICP, Dry ash (ppm)	5	4	10.80	0.4247	10.80	0.4247	0.2123	3.93%	0.5735	11.18%
017.42	Boron, ICP, Open vessel (ppm)	3	3	12.00	1.418	12.00	1.418	0.8187	11.82%	0.4500	11.01%
017.53	Boron, ICP-MS, Microwave (ppm)	2	2	12.26	1.476						
017.52	Boron, ICP-MS, Open vessel (ppm)	1	1	10.11							
017.99	Boron, Miscellaneous (ppm)	1	1	10.45							
019.43	Calcium, ICP, Microwave (%)	36	36	0.8788	0.0567	0.8781	0.0541	0.0113	6.16%	0.0278	4.08%
019.41	Calcium, ICP, Dry ash (%)	19	19	0.8862	0.0343	0.8851	0.0282	0.0081	3.19%	0.0339	4.07%
019.42	Calcium, ICP, Open vessel (%)	20	19	0.9061	0.0553	0.9009	0.0498	0.0143	5.53%	0.0245	4.06%
019.31	Calcium, AAS, Dry ash (%)	14	13	0.9078	0.1890	0.8788	0.0486	0.0168	5.53%	0.0165	4.08%
019.08	Calcium, EDTA (%)	8	8	0.9323	0.0467	0.9323	0.0530	0.0234	5.69%	0.0248	4.04%
019.00	Calcium, Ox-Mn04 Vol. (%)	7	6	0.8763	0.1277	0.9058	0.0694	0.0354	7.66%	0.0279	4.06%
019.53	Calcium, ICP-MS, Microwave (%)	5	5	0.9029	0.0391	0.9029	0.0391	0.0175	4.33%	0.0137	4.06%
019.99	Calcium, Miscellaneous (%)	5	5	0.8744	0.0338	0.8744	0.0338	0.0151	3.86%	0.0220	4.08%
019.52	Calcium, ICP-MS, Open vessel (%)	4	4	0.8540	0.0452	0.8540	0.0452	0.0226	5.30%	0.0368	4.10%
019.33	Calcium, AAS, Microwave (%)	2	2	0.8500	0.0495						
019.02	Calcium, Hach Method (%)	1	1	0.9700							
019.09	Calcium, Ion-selective electrode (%)	1	1	0.9440							
019.32	Calcium, AAS, Open vessel (%)	1	1	0.9250							
019.44	Calcium, ICP, Dry ash (%)	1	1	0.8890							
021.43	Cobalt, ICP, Microwave (ppm)	12	10	1.082	0.1974	1.080	0.2191	0.0866	20.29%	0.0506	15.81%
021.53	Cobalt, ICP-MS, Microwave (ppm)	7	7	1.171	0.1101	1.172	0.0614	0.0290	5.24%	0.0773	15.62%
021.41	Cobalt, ICP, Dry ash (ppm)	4	4	1.190	0.1039	1.190	0.1039	0.0520	8.73%	0.0790	15.58%
021.52	Cobalt, ICP-MS, Open vessel (ppm)	3	3	0.9463	0.0145	0.9463	0.0145	0.0084	1.53%	0.0304	16.13%
021.42	Cobalt, ICP, Open vessel (ppm)	2	2	1.205	0.0778						
021.31	Cobalt, AAS, Dry ash (ppm)	1	1	1.037							
022.43	Copper, ICP, Microwave (ppm)	30	29	21.73	3.046	21.31	1.766	0.4099	8.29%	1.072	10.09%
022.42	Copper, ICP, Open vessel (ppm)	21	21	22.89	2.362	22.80	2.240	0.6110	9.83%	1.152	9.99%
022.41	Copper, ICP, Dry ash (ppm)	15	15	21.76	3.276	21.27	2.405	0.7762	11.31%	2.184	10.10%
022.31	Copper, AAS, Dry ash (ppm)	9	8	19.20	3.750	19.74	2.882	1.274	14.60%	0.3891	10.21%
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	24.34	2.857	24.34	2.857	1.278	11.74%	1.827	9.89%
022.99	Copper, Miscellaneous (ppm)	4	4	21.82	1.334	21.82	1.334	0.6672	6.11%	1.074	10.06%
022.52	Copper, ICP-MS, Open vessel (ppm)	3	3	22.68	0.6917	22.68	0.6917	0.4891	3.05%	0.4670	10.00%
022.44	Copper, ICP, Dry ash (ppm)	2	2	22.18	0.2581						
022.32	Copper, AAS, Open vessel (ppm)	1	1	23.30							
024.53	Iodine, ICP-MS, Microwave (ppm)	1	1	1.465							
025.43	Iron, ICP, Microwave (ppm)	30	29	222.8	20.95	223.1	17.25	4.003	7.73%	6.429	7.09%
025.42	Iron, ICP, Open vessel (ppm)	20	20	221.1	19.92	219.2	17.47	4.883	7.97%	6.878	7.11%
025.41	Iron, ICP, Dry ash (ppm)	17	17	224.2	14.36	225.9	10.57	3.205	4.68%	11.44	7.08%

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
025.31	Iron, AAS, Dry ash (ppm)	10	9	222.1	22.59	227.0	11.66	4.859	5.14%	6.409	7.07%
025.53	Iron, ICP-MS, Microwave (ppm)	6	5	221.6	18.18	221.6	18.18	10.16	8.21%	7.473	7.10%
025.99	Iron, Miscellaneous (ppm)	4	4	214.3	8.241	214.3	8.241	4.121	3.85%	3.073	7.13%
025.52	Iron, ICP-MS, Open vessel (ppm)	3	3	199.6	14.99	199.6	14.99	8.656	7.51%	14.84	7.21%
027.43	Magnesium, ICP, Microwave (%)	31	30	0.3202	0.0215	0.3220	0.0187	0.0043	5.80%	0.0097	4.74%
027.42	Magnesium, ICP, Open vessel (%)	20	19	0.3319	0.0172	0.3310	0.0173	0.0050	5.23%	0.0081	4.72%
027.41	Magnesium, ICP, Dry ash (%)	16	16	0.3217	0.0152	0.3221	0.0138	0.0043	4.28%	0.0139	4.74%
027.31	Magnesium, AAS, Dry ash (%)	7	7	0.3259	0.0098	0.3259	0.0111	0.0052	3.41%	0.0076	4.73%
027.53	Magnesium, ICP-MS, Microwave (%)	5	5	0.3241	0.0228	0.3241	0.0228	0.0102	7.03%	0.0060	4.74%
027.99	Magnesium, Miscellaneous (%)	4	4	0.3001	0.0509	0.3001	0.0509	0.0255	16.96%	0.0203	4.79%
027.52	Magnesium, ICP-MS, Open vessel (%)	4	3	0.3195	0.0013	0.3195	0.0013	0.0007	0.40%	0.0141	4.75%
027.32	Magnesium, AAS, Open vessel (%)	1	1	0.3200							
027.44	Magnesium, ICP, Dry ash (%)	1	1	0.3250							
028.43	Manganese, ICP, Microwave (ppm)	32	32	119.0	7.615	118.8	8.009	1.770	6.74%	4.514	7.79%
028.42	Manganese, ICP, Open vessel (ppm)	21	20	121.4	7.541	121.6	8.249	2.306	6.79%	3.713	7.77%
028.41	Manganese, ICP, Dry ash (ppm)	15	15	116.0	4.193	116.0	4.754	1.535	4.10%	4.557	7.82%
028.31	Manganese, AAS, Dry ash (ppm)	10	9	122.8	10.02	122.1	9.745	4.061	7.98%	2.806	7.76%
028.53	Manganese, ICP-MS, Microwave (ppm)	6	6	114.9	6.630	114.9	7.518	3.836	6.54%	4.459	7.83%
028.99	Manganese, Miscellaneous (ppm)	4	4	127.5	12.48	127.5	12.48	6.238	9.79%	5.064	7.71%
028.52	Manganese, ICP-MS, Open vessel (ppm)	3	3	118.3	4.991	118.3	4.991	2.881	4.22%	2.972	7.80%
028.44	Manganese, ICP, Dry ash (ppm)	2	2	107.1	19.61						
028.32	Manganese, AAS, Open vessel (ppm)	1	1	132.0							
028.33	Manganese, AAS, Microwave (ppm)	1	1	121.7							
030.01	Nitrate, Ion-selective electrode (%)	1		0.0000							
031.43	Phosphorus, ICP, Microwave (%)	37	36	0.6375	0.0243	0.6383	0.0243	0.0051	3.80%	0.0131	4.28%
031.01	Phosphorus, Photometric (%)	23	23	0.6270	0.0325	0.6278	0.0329	0.0086	5.24%	0.0142	4.29%
031.42	Phosphorus, ICP, Open vessel (%)	22	22	0.6435	0.0342	0.6433	0.0379	0.0101	5.89%	0.0159	4.27%
031.41	Phosphorus, ICP, Dry ash (%)	19	19	0.6407	0.0242	0.6402	0.0261	0.0075	4.07%	0.0284	4.28%
031.99	Phosphorus, Miscellaneous (%)	6	6	0.5198	0.2286	0.5877	0.0803	0.0410	13.66%	0.0155	4.33%
031.53	Phosphorus, ICP-MS, Microwave (%)	4	4	0.6745	0.0246	0.6745	0.0246	0.0123	3.65%	0.0109	4.24%
031.03	Phosphorus, Autoanalyzer (%)	2	2	0.6190	0.0198						
031.44	Phosphorus, ICP, Dry ash (%)	2	2	0.6075	0.0467						
031.52	Phosphorus, ICP-MS, Open vessel (%)	2	2	0.6272	0.0135						
031.02	Phosphorus, GQMP (AOAC 935.13-Extraction) (%)	1	1	0.6440							
031.06	Phosphorus, Hach Method (%)	1	1	0.7650							
032.43	Potassium, ICP, Microwave (%)	32	31	1.150	0.0547	1.150	0.0499	0.0112	4.34%	0.0227	3.92%
032.42	Potassium, ICP, Open vessel (%)	20	19	1.181	0.0660	1.179	0.0723	0.0207	6.13%	0.0258	3.90%
032.41	Potassium, ICP, Dry ash (%)	17	17	1.131	0.0571	1.138	0.0407	0.0123	3.58%	0.0460	3.92%
032.31	Potassium, AAS, Dry ash (%)	6	6	1.101	0.0984	1.101	0.1115	0.0569	10.13%	0.0181	3.94%
032.53	Potassium, ICP-MS, Microwave (%)	5	5	1.179	0.0243	1.179	0.0243	0.0109	2.06%	0.0416	3.90%

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
032.99	Potassium, Miscellaneous (%)	5	5	1.156	0.0220	1.156	0.0220	0.0098	1.90%	0.0250	3.91%
032.52	Potassium, ICP-MS, Open vessel (%)	3	3	1.127	0.1052	1.127	0.1052	0.0608	9.34%	0.0376	3.93%
032.32	Potassium, AAS, Open vessel (%)	1	1	1.145							
032.33	Potassium, AAS, Microwave (%)	1	1	1.170							
032.44	Potassium, ICP, Dry ash (%)	1	1	1.255							
033.01	Salt as chloride, Poten Cl (%)	27	27	0.5603	0.0233	0.5588	0.0227	0.0055	4.06%	0.0143	4.37%
033.99	Salt, Miscellaneous (%)	13	12	0.6996	0.2659	0.6996	0.3015	0.1088	43.09%	0.0270	4.22%
033.00	Salt as chloride, Sol Cl (%)	10	10	0.4881	0.0834	0.4910	0.0879	0.0348	17.91%	0.0281	4.45%
033.03	Salt as chloride, Quantab (%)	5	3	0.5000	0.0400	0.5000	0.0400				4.44%
033.05	Salt as chloride, Ion Sel Electrode (%)	3	3	0.6467	0.2462	0.6467	0.2462	0.1421	38.07%	0.0333	4.27%
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	9	9	0.6349	0.0919	0.6184	0.0589	0.0246	9.53%	0.0330	17.20%
034.04	Selenium, Total (Se), AA, Hydride (ppm)	3	3	0.5610	0.1298	0.5610	0.1298	0.0749	23.14%	0.0237	17.45%
034.52	Selenium, Total (Se), ICP-MS, Open vessel (ppm)	3	3	0.5639	0.0511	0.5639	0.0511	0.0295	9.06%	0.0347	17.44%
034.41	Selenium, Total (Se), ICP, Dry ash (ppm)	2	2	0.5810	0.0128						
034.43	Selenium, Total (Se), ICP, Microwave (ppm)	5	2	0.6215	0.0403	0.6215	0.0403			0.0390	17.18%
034.01	Selenium, Total (Se), Fluor (ppm)	1	1	0.7185							
034.42	Selenium, Total (Se), ICP, Open vessel (ppm)	2	1	1.156							
034.99	Selenium, Total (Se), Miscellaneous (ppm)	1	1	1.495							
035.43	Sodium, ICP, Microwave (%)	25	25	0.4104	0.0220	0.4098	0.0236	0.0059	5.76%	0.0167	4.57%
035.42	Sodium, ICP, Open vessel (%)	19	18	0.4222	0.0155	0.4223	0.0175	0.0051	4.13%	0.0129	4.55%
035.41	Sodium, ICP, Dry ash (%)	17	17	0.4100	0.0167	0.4100	0.0182	0.0055	4.45%	0.0135	4.57%
035.31	Sodium, AAS, Dry ash (%)	7	6	0.4081	0.0238	0.4081	0.0270	0.0138	6.62%	0.0143	4.58%
035.52	Sodium, ICP-MS, Open vessel (%)	3	3	0.4123	0.0085	0.4123	0.0085	0.0060	2.06%	0.0218	4.57%
035.53	Sodium, ICP-MS, Microwave (%)	4	3	0.3860	0.0420	0.3860	0.0420	0.0297	10.89%		4.62%
035.99	Sodium, Miscellaneous (%)	4	3	0.4267	0.0029	0.4267	0.0029	0.0017	0.68%	0.0133	4.55%
035.05	Sodium, Flame Emission (%)	1	1	0.1750							
035.32	Sodium, AAS, Open vessel (%)	1	1	0.3450							
035.33	Sodium, AAS, Microwave (%)	1	1	0.4000							
036.43	Sulfur, ICP, Microwave (%)	20	19	0.5294	0.0216	0.5282	0.0166	0.0047	3.13%	0.0126	4.40%
036.42	Sulfur, ICP, Open vessel (%)	16	16	0.5111	0.0291	0.5124	0.0301	0.0094	5.87%	0.0138	4.42%
036.04	Sulfur, LECO (%)	4	4	0.5370	0.0271	0.5370	0.0271	0.0135	5.04%	0.0130	4.39%
036.99	Sulfur, Miscellaneous (%)	2	2	0.4850	0.0778						
036.52	Sulfur, ICP-MS, Open vessel (%)	1	1	0.5428							
036.53	Sulfur, ICP-MS, Microwave (%)	1	1	0.5375							
037.43	Zinc, ICP, Microwave (ppm)	33	32	151.0	10.78	150.7	11.25	2.485	7.46%	5.552	7.52%
037.42	Zinc, ICP, Open vessel (ppm)	21	21	152.2	14.22	151.6	14.55	3.968	9.59%	6.833	7.51%
037.41	Zinc, ICP, Dry ash (ppm)	15	15	151.4	9.827	151.9	9.751	3.147	6.42%	6.672	7.51%
037.31	Zinc, AAS, Dry ash (ppm)	8	8	146.5	12.14	148.4	8.961	3.960	6.04%	1.881	7.54%
037.53	Zinc, ICP-MS, Microwave (ppm)	6	6	146.6	7.059	148.0	4.690	2.393	3.17%	5.456	7.54%
037.52	Zinc, ICP-MS, Open vessel (ppm)	3	3	148.0	6.030	148.0	6.030	4.264	4.07%	2.217	7.54%

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
037.99	Zinc, Miscellaneous (ppm)	4	3	164.4	29.61	164.4	29.61	17.10	18.01%	1.500	7.42%
037.44	Zinc, ICP, Dry ash (ppm)	2	2	134.2	28.66						
037.32	Zinc, AAS, Open vessel (ppm)	1	1	153.0							
038.43	Molybdenum, ICP, Microwave (ppm)	11	10	1.620	0.4466	1.590	0.3979	0.1573	25.02%	0.1355	14.92%
038.53	Molybdenum, ICP-MS, Microwave (ppm)	6	6	1.779	0.1116	1.779	0.1266	0.0646	7.12%	0.0825	14.67%
038.42	Molybdenum, ICP, Open vessel (ppm)	6	5	1.747	0.1542	1.747	0.1542	0.0862	8.82%	0.2716	14.71%
038.52	Molybdenum, ICP-MS, Open vessel (ppm)	3	3	1.575	0.1366	1.575	0.1366	0.0788	8.67%	0.0402	14.94%
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	1.357	0.0966						
038.99	Molybdenum, Miscellaneous (ppm)	1	1	1.990							
040.43	Barium, ICP, Microwave (ppm)	1	1	14.88							
040.52	Barium, ICP-MS, Open vessel (ppm)	1	1	12.77							
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	14.18							
041.53	Vanadium, ICP-MS, Microwave (ppm)	2	2	0.2627	0.0441						
042.00	Chloride, Titrimetric (%)	4	4	0.3433	0.0313	0.3433	0.0313	0.0156	9.12%	0.0115	4.70%
042.99	Chloride, Miscellaneous (%)	2	2	0.3015	0.0403						
042.01	Chloride, Ion-selective electrode (%)	1	1	0.3424							
101.99	Choline Chloride, Miscellaneous (ppm)	1	1	1,560							
102.01	Niacin, Microbiological (ppm)	1	1	65.90							
102.02	Niacin, LC (ppm)	1	1	17.05							
103.01	Pantothenic Acid, Microbiological (ppm)	1	1	6.670							
104.00	Riboflavin, Fluorometric (ppm)	1	1	2.285							
104.03	Riboflavin, LC (ppm)	2	1	1.095							
105.00	Thiamine, LC (ppm)	1	1	1.870							
105.01	Thiamine, Fluorometer (ppm)	1	1	3.375							
106.02	Vitamin A, LC (KU / kg)	11	11	17.89	4.400	17.83	4.867	1.834	27.30%	1.821	
106.00	Vitamin A, Color (KU / kg)	1	1	17.25							
106.01	Vitamin A, UV (KU / kg)	1	1	19.35							
106.03	#N/A	1	1	17.82							
107.00	Vitamin B12, Microbiological (ppb)	1		4.400							
107.99	Vitamin B12, Miscellaneous (ppb)	1		20.00							
108.02	Vitamin D3, LC (KU / kg)	5	3	6.295	0.9025	6.295	0.9025	0.5211	14.34%	0.3367	
109.02	Vitamin E, LC (IU / kg)	10	10	125.4	23.74	127.5	14.19	5.611	11.13%	14.57	
109.03	#N/A	1	1	113.6							
111.00	Vitamin C, Phosphorylated, LC (ppm)	1		4.400							
112.01	Pyridoxine, LC (µg / g)	2	2	3.983	1.679						
113.01	Folic Acid, Micro (ppm)	1	1	1.070							
113.02	Folic acid, LC (ppm)	1		0.1000							
114.01	Biotin, Microbiological (ppm)	1	1	0.2225							
114.99	Biotin, Miscellaneous (ppm)	1	1	0.1510							
115.00	Non Protein N (NPN), Urea + Am, Urease method (%)	2	2	0.3792	0.3830						

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
115.99	Non Protein N (NPN), Miscellaneous (%)	1	1	0.5825							
120.00	Alanine, Post-col Ninhydrin Der (%)	14	14	0.8680	0.0200	0.8668	0.0184	0.0061	2.12%	0.0074	4.09%
120.05	Alanine, Pre-col AQC Der (%)	8	8	0.8711	0.0680	0.8784	0.0592	0.0262	6.74%	0.0285	4.08%
120.99	Alanine, Miscellaneous (%)	2	2	0.8675	0.0106						
120.02	Alanine, Post-col OPA Der (%)	1	1	0.8700							
121.00	Arginine, Post-col Ninhydrin Der (%)	14	13	1.071	0.0334	1.071	0.0378	0.0131	3.53%	0.0096	3.96%
121.05	Arginine, Pre-col AQC Der (%)	8	7	1.112	0.0976	1.110	0.1061	0.0501	9.56%	0.0207	3.94%
121.99	Arginine, Miscellaneous (%)	2	2	1.043	0.0035						
121.02	Arginine, Post-col OPA Der (%)	1	1	1.033							
122.00	Aspartic, Post-col Ninhydrin Der (%)	14	14	1.378	0.0271	1.377	0.0278	0.0093	2.02%	0.0151	3.81%
122.05	Aspartic, Pre-col AQC Der (%)	8	8	1.414	0.1203	1.410	0.1277	0.0564	9.05%	0.0474	3.80%
122.99	Aspartic, Miscellaneous (%)	2	2	1.408	0.0035						
122.02	Aspartic, Post-col OPA Der (%)	1	1	1.382							
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	14	13	0.3034	0.0084	0.3039	0.0084	0.0029	2.76%	0.0052	4.78%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	7	6	0.3079	0.0149	0.3079	0.0168	0.0086	5.47%	0.0035	4.78%
124.99	Cysteine/Cystine, Miscellaneous (%)	2	2	0.2750	0.0071						
124.02	Cysteine/Cystine, PAO Post-col OPA Der (%)	1	1	0.3275							
125.00	Glutamic, Post-col Ninhydrin Der (%)	14	14	3.155	0.0588	3.155	0.0667	0.0223	2.11%	0.0253	3.36%
125.05	Glutamic, Pre-col AQC Der (%)	8	8	3.166	0.2124	3.166	0.2409	0.1065	7.61%	0.1361	3.36%
125.99	Glutamic, Miscellaneous (%)	2	2	3.128	0.0106						
125.02	Glutamic, Post-col OPA Der (%)	1	1	3.133							
126.00	Glycine, Post-col Ninhydrin Der (%)	14	14	0.8293	0.0221	0.8279	0.0216	0.0072	2.61%	0.0053	4.12%
126.05	Glycine, Pre-col AQC Der (%)	8	8	0.8517	0.0751	0.8487	0.0784	0.0346	9.24%	0.0536	4.10%
126.99	Glycine, Miscellaneous (%)	2	2	0.8000	0.0495						
126.02	Glycine, Post-col OPA Der (%)	1	1	0.8350							
127.00	Histidine, Post-col Ninhydrin Der (%)	14	13	0.4369	0.0180	0.4384	0.0166	0.0057	3.78%	0.0058	4.53%
127.05	Histidine, Pre-col AQC Der (%)	8	7	0.4481	0.0342	0.4466	0.0353	0.0167	7.90%	0.0132	4.52%
127.99	Histidine, Miscellaneous (%)	2	2	0.3975	0.0530						
127.02	Histidine, Post-col OPA Der (%)	1	1	0.4520							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	14	14	0.6090	0.0280	0.6058	0.0227	0.0076	3.75%	0.0074	4.31%
128.05	Isoleucine, Pre-col AQC Der (%)	8	8	0.6007	0.0449	0.6051	0.0402	0.0178	6.64%	0.0202	4.31%
128.99	Isoleucine, Miscellaneous (%)	2	2	0.5875	0.0318						
128.02	Isoleucine, Post-col OPA Der (%)	1	1	0.6450							
129.00	Leucine, Post-col Ninhydrin Der (%)	14	13	1.316	0.0322	1.313	0.0306	0.0106	2.33%	0.0081	3.84%
129.05	Leucine, Pre-col AQC Der (%)	8	8	1.277	0.0901	1.287	0.0765	0.0338	5.94%	0.0450	3.85%
129.99	Leucine, Miscellaneous (%)	2	2	1.303	0.0177						
129.02	Leucine, Post-col OPA Der (%)	1	1	1.322							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	15	15	0.7179	0.0374	0.7144	0.0343	0.0111	4.80%	0.0105	4.21%
130.05	L-Lysine, Pre-col AQC Der (%)	8	8	0.7229	0.0529	0.7229	0.0599	0.0265	8.29%	0.0203	4.20%
130.99	L-Lysine, Miscellaneous (%)	2	2	0.7100	0.0283						

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
130.02	L-Lysine, Post-col OPA Der (%)	1	1	0.7875							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	15	15	0.2613	0.0113	0.2612	0.0110	0.0036	4.22%	0.0063	4.90%
131.05	Methionine, PAO Pre-col AQC Der (%)	7	7	0.2667	0.0102	0.2661	0.0087	0.0041	3.27%	0.0086	4.88%
131.99	Methionine, Miscellaneous (%)	2	2	0.2600	0.0212						
131.02	Methionine, PAO Post-col OPA Der (%)	1	1	0.2600							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	14	13	0.7816	0.0248	0.7809	0.0265	0.0092	3.39%	0.0104	4.15%
132.05	Phenylalanine, Pre-col AQC Der (%)	8	7	0.7702	0.0791	0.7702	0.0897	0.0424	11.64%	0.0199	4.16%
132.99	Phenylalanine, Miscellaneous (%)	2	2	0.7675	0.0035						
132.02	Phenylalanine, Post-col OPA Der (%)	1	1	0.7745							
133.00	Proline, Post-col Ninhydrin Der (%)	14	13	1.060	0.0475	1.060	0.0452	0.0157	4.27%	0.0132	3.96%
133.05	Proline, Pre-col AQC Der (%)	8	8	1.082	0.0646	1.082	0.0733	0.0324	6.78%	0.0421	3.95%
133.99	Proline, Miscellaneous (%)	2	2	1.105	0.0354						
134.00	Serine, Post-col Ninhydrin Der (%)	14	14	0.7958	0.0278	0.7959	0.0169	0.0056	2.12%	0.0104	4.14%
134.05	Serine, Pre-col AQC Der (%)	8	7	0.8086	0.0545	0.8053	0.0269	0.0127	3.34%	0.0298	4.13%
134.99	Serine, Miscellaneous (%)	2	2	0.7950	0.0283						
134.02	Serine, Post-col OPA Der (%)	1	1	0.7245							
135.00	Threonine, Post-col Ninhydrin Der (%)	14	14	0.5940	0.0177	0.5937	0.0171	0.0057	2.88%	0.0097	4.33%
135.05	Threonine, Pre-col AQC Der (%)	8	7	0.6047	0.0252	0.6014	0.0206	0.0097	3.43%	0.0120	4.32%
135.99	Threonine, Miscellaneous (%)	2	2	0.5900	0.0283						
135.02	Threonine, Post-col OPA Der (%)	1	1	0.5445							
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	7	7	0.2472	0.0236	0.2472	0.0268	0.0126	10.82%	0.0041	4.94%
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	3	3	0.2297	0.0479	0.2297	0.0479	0.0339	20.86%	0.0052	4.99%
136.05	Tryptophan, Pre-col AQC Der (%)	3	3	0.2237	0.0105	0.2237	0.0105	0.0075	4.71%	0.0080	5.01%
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	2	2	0.2203	0.0074						
136.99	Tryptophan, Miscellaneous (%)	2	2	0.1820	0.0311						
136.02	Tryptophan, Alka-Hydrol Post-col OPA De (%)	1	1	0.2194							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	12	12	0.5362	0.0340	0.5362	0.0386	0.0139	7.20%	0.0139	4.39%
137.05	Tyrosine, Pre-col AQC Der (%)	8	8	0.5435	0.0732	0.5435	0.0830	0.0367	15.28%	0.0215	4.38%
137.99	Tyrosine, Miscellaneous (%)	2	2	0.4675	0.0106						
137.02	Tyrosine, Post-col OPA Der (%)	1	1	0.4685							
138.00	Valine, Post-col Ninhydrin Der (%)	14	14	0.7940	0.0325	0.7906	0.0274	0.0092	3.47%	0.0095	4.14%
138.05	Valine, Pre-col AQC Der (%)	8	8	0.7672	0.0714	0.7717	0.0704	0.0311	9.12%	0.0293	4.16%
138.99	Valine, Miscellaneous (%)	2	2	0.7800	0.0424						
138.02	Valine, Post-col OPA Der (%)	1	1	0.8360							
139.00	Taurine, Post-col Ninhydrin Der (%)	2	2	0.1300	0.0707						
139.05	Taurine, Pre-col AQC Der (%)	2	1	0.0825							
139.02	Taurine, Post-col OPA Der (%)	1		0.0100							
139.99	Taurine, Miscellaneous (%)	1		0.0100							
160.10	Fructose, HPAEC PAD (%)	2	2	0.2150	0.0849						
160.99	Fructose, Miscellaneous (%)	1	1	0.3400							

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
161.10	Galactose, HPAEC PAD (%)	2	1	0.1300							
162.10	Glucose, HPAEC PAD (%)	2	2	0.3000	0.0778						
162.99	Glucose, Miscellaneous (%)	1	1	0.5250							
163.10	Lactose, HPAEC PAD (%)	2	1	0.0300							
163.99	Lactose, Miscellaneous (%)	1		0.1500							
164.10	Maltose, HPAEC PAD (%)	2	2	0.2950	0.0071						
164.99	Maltose, Miscellaneous (%)	1		0.1500							
165.10	Sucrose, HPAEC PAD (%)	2	2	1.955	0.3041						
165.99	Sucrose, Miscellaneous (%)	1	1	1.510							
166.10	Raffinose, HPAEC PAD (%)	2	2	0.9000	0.0990						
166.99	Raffinose, Miscellaneous (%)	1	1	0.5450							
167.10	Stachyose, HPAEC PAD (%)	2	2	0.8750	0.0000						
167.99	Stachyose, Miscellaneous (%)	1	1	0.8850							
354.04	Decoquinatate, LC-MS/MS (ppm)	2	2	1.493	1.142						
365.05	Monensin, LC-MS/MS (ppm)	13	13	38.17	4.416	38.16	4.981	1.727	13.05%	2.080	9.25%
365.03	Monensin, LC-PCD (ppm)	10	10	36.53	3.428	36.39	3.562	1.408	9.79%	0.9902	9.31%
365.02	Monensin, LC (ppm)	3	3	42.47	10.78	42.47	10.78	6.222	25.37%	2.143	9.10%
365.99	Monensin, Miscellaneous (ppm)	2	2	36.27	1.312						
365.00	Monensin, Plate (ppm)	1	1	34.73							
365.04	Monensin, LC-MS (ppm)	1	1	26.00							
400.01	Water Activity, Aqualab chilled mirror (Units)	12	11	0.4506	0.0386	0.4556	0.0322	0.0121	7.06%	0.0068	
400.99	Water Activity, Miscellaneous (Units)	5	5	0.5183	0.1115	0.5183	0.1115	0.0498	21.50%	0.0068	
516.53	Arsenic, Total (As), ICP-MS, Microwave (ppm)	4	4	0.0389	0.0062	0.0389	0.0062	0.0031	15.90%	0.0095	22.00%
516.00	Arsenic, Total (As), AA, Hydride (ppm)	1	1	0.0485							
516.52	Arsenic, Total (As), ICP-MS, Open vessel (ppm)	2	1	0.0452							
516.43	Arsenic, Total (As), ICP, Microwave (ppm)	1		20.00							
518.53	Cadmium, ICP-MS, Microwave (ppm)	5	4	0.1209	0.0028	0.1209	0.0028	0.0014	2.32%	0.0027	21.99%
518.43	Cadmium, ICP, Microwave (ppm)	2	2	0.1713	0.1254						
518.52	Cadmium, ICP-MS, Open vessel (ppm)	2	2	0.1178	0.0038						
518.41	Cadmium, ICP, Dry ash (ppm)	1	1	0.0639							
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	8	6	2.267	0.5817	2.266	0.6596	0.3366	29.10%	0.0405	14.14%
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	5	5	1.852	0.6594	1.852	0.6594	0.2949	35.60%	0.1284	14.58%
520.42	Chromium, Total (Cr), ICP, Open vessel (ppm)	2	2	2.399	0.3055						
520.52	Chromium, Total (Cr), ICP-MS, Open vessel (ppm)	2	2	1.238	0.5024						
520.41	Chromium, Total (Cr), ICP, Dry ash (ppm)	1	1	1.330							
526.53	Lead, ICP-MS, Microwave (ppm)	4	4	0.0688	0.0042	0.0688	0.0042	0.0021	6.07%	0.0116	22.00%
526.43	Lead, ICP, Microwave (ppm)	2	2	0.6914	0.7901						
526.52	Lead, ICP-MS, Open vessel (ppm)	2	2	0.0683	0.0028						
526.41	Lead, ICP, Dry ash (ppm)	1	1	0.0324							
529.99	Mercury, Miscellaneous (ppb)	4	2	270.3	381.4	270.3	381.4				19.48%

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
539.43	Nickel, ICP, Microwave (ppm)	5	5	2.403	0.7633	2.403	0.7633	0.3414	31.77%	0.0411	14.02%
539.52	Nickel, ICP-MS, Open vessel (ppm)	2	2	1.590	0.1362						
539.53	Nickel, ICP-MS, Microwave (ppm)	2	2	2.121	0.1845						
539.41	Nickel, ICP, Dry ash (ppm)	1	1	1.717							
702.00	Butyric Acid (4:0), Miscellaneous GC (%)	1		0.0005							
704.00	Caproic Acid (6:0) , Miscellaneous GC (%)	1		0.0000							
706.99	Caprylic acid (8:0), Miscellaneous (%) (w/w))	1		0.0005							
708.99	Capric acid (10:0), Miscellaneous (%) (w/w))	1		0.0005							
710.99	Lauric Acid (12:0), Miscellaneous (%) (w/w))	3	1								
714.99	Myristic Acid (14:0), Miscellaneous (%) (w/w))	3	3	0.0082	0.0018	0.0082	0.0018	0.0013	21.84%		8.25%
716.99	Palmitic Acid (16:0), Miscellaneous (%) (w/w))	3	3	0.6990	0.0170	0.6990	0.0170	0.0098	2.44%	0.0266	4.22%
718.99	Palmitoleic Acid (9c-16:1), Miscellaneous (%) (w/w))	3	3	0.0090	0.0009	0.0090	0.0009	0.0006	9.67%		8.13%
720.99	Margaric acid (17:0), Miscellaneous (%) (w/w))	1	1	0.0080							
722.99	Stearic Acid (18:0), Miscellaneous (%) (w/w))	3	3	0.0918	0.0018	0.0918	0.0018	0.0010	1.91%	0.0066	5.73%
724.99	Oleic Acid (9c-18:1), Miscellaneous (%) (w/w))	3	3	0.8123	0.0225	0.8123	0.0225	0.0130	2.77%	0.0260	4.13%
726.99	Linoleic Acid (9c,12c-18:2), Miscellaneous (%) (w/w))	3	3	2.269	0.1015	2.269	0.1015	0.0586	4.47%	0.0629	3.54%
728.99	alpha-Linolenic Acid (9c,12c,15c-18:3), Miscellaneous (%) (w/w))	3	3	0.1528	0.0070	0.1528	0.0070	0.0040	4.59%	0.0079	5.31%
730.99	Arachidic Acid (20:0), Miscellaneous (%) (w/w))	3	3	0.0122	0.0019	0.0122	0.0019	0.0013	15.47%	0.0016	7.77%
732.99	Gondoic Acid (11c-20:1), Miscellaneous (%) (w/w))	2	2	0.0174	0.0006						
736.99	Arachidonic Acid (5c,8c,11c,14c-20:4), Miscellaneous (%) (w/w))	2		0.0000							
740.99	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5), Miscellaneous (%) (w/w))	3	1								
742.99	Behenic Acid (22:0), Miscellaneous (%) (w/w))	2	2	0.0114	0.0023						
744.99	Erucic Acid (13c-22:1), Miscellaneous (%) (w/w))	2	1	0.0040							
746.99	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5), Miscellaneous (%) (w/w))	3									
748.99	Lignoceric Acid (24:0), Miscellaneous (%) (w/w))	2	2	0.0125	0.0008						
750.99	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6), Miscellaneous (%) (w/w))	3									
752.99	Nervonic Acid (24:1) isomers, Miscellaneous (%) (w/w))	2	1	0.0100							
754.99	Total n-3 Polyunsaturated (Omega-3) Fatty Acids, Miscellaneous (%) (w/w))	2	2	0.1710	0.0339						
756.99	Total n-6 Polyunsaturated (Omega-6) Fatty Acids, Miscellaneous (%) (w/w))	2	2	2.296	0.1262						
758.99	Total Saturated Fatty Acids, Miscellaneous (%) (w/w))	2	2	0.8740	0.0226						
762.99	Total Monounsaturated Fatty Acids, Miscellaneous (%) (w/w))	1	1	0.9100							
764.99	Total cis Monounsaturated Fatty Acids, Miscellaneous (%) (w/w))	1	1	0.8870							
768.99	Total cis Polyunsaturated Fatty Acids, Miscellaneous (%) (w/w))	1	1	2.362							
770.99	Total Fat (equivalent to NLEA), Miscellaneous (%) (w/w))	1	1	4.318							
772.99	Total Fatty Acids, Miscellaneous (%) (w/w))	2	2	4.079	0.0693						

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

Calf Starter, Medicated

Test Material Code # 202523

Method Precision Report

Methods Reported: 140

Labs Reporting: 165

Issue Date : 04/30/2025

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 (%)	45	39	7.982	0.4586	0.2356	0.0944	0.2538	2.91%	1.17%	3.14%	2.688
001.99	Loss on Drying, Miscellaneous (%)	17	14	8.012	0.9218	0.5172	0.0946	0.5258	6.62%	1.21%	6.73%	5.557
002.01	Protein, Crude, Auto Kjel-Foss (%)	15	13	17.80	0.1691	0.1242	0.0573	0.1368	0.70%	0.32%	0.77%	2.389
002.05	Protein, Crude, Copper, Boric Acid (%)	21	19	17.76	0.2926	0.2192	0.1023	0.2419	1.24%	0.58%	1.37%	2.364
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	111	104	18.11	0.5454	0.3688	0.1756	0.4085	2.05%	0.97%	2.27%	2.326
002.11	Protein, Crude, NIR (%)	6	6	18.53	1.661	1.647	0.3066	1.675	8.89%	1.65%	9.04%	5.464
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	10	3.933	0.2768	0.2753	0.0405	0.2783	7.00%	1.03%	7.08%	6.876
003.06	Fat, Crude, Pet Ether (%)	17	15	3.887	0.2386	0.1665	0.0663	0.1792	4.30%	1.71%	4.63%	2.703
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	8	7	3.889	0.3716	0.1887	0.0692	0.2010	4.71%	1.73%	5.02%	2.903
003.10	Fat, Crude, Randall, Pet Ether (%)	28	24	3.776	0.2912	0.2432	0.0441	0.2472	6.48%	1.18%	6.58%	5.600
003.11	Fat, Crude, NIR (%)	6	6	4.215	0.8837	0.8679	0.2347	0.8991	20.59%	5.57%	21.33%	3.830
003.14	Fat, Crude, Ankom (%)	56	51	3.971	0.3983	0.3190	0.1057	0.3361	8.07%	2.68%	8.51%	3.178
004.00	Fiber, Crude, Asbestos Free (%)	6	6	13.96	0.5818	0.5677	0.1798	0.5955	4.07%	1.29%	4.27%	3.312
004.06	Fiber, Crude, Fibertec (%)	17	16	14.11	0.8355	0.6496	0.2357	0.6911	4.65%	1.69%	4.94%	2.932
004.07	Fiber, Crude, ANKOM (%)	76	71	14.12	0.6247	0.5438	0.2307	0.5908	3.86%	1.64%	4.20%	2.560
004.11	Fiber, Crude, NIR (%)	5	5	13.13	1.205	1.184	0.3147	1.225	9.02%	2.40%	9.34%	3.893
005.00	Ash, 2h @ 600°C (%)	89	82	6.511	0.2381	0.1927	0.0626	0.2026	2.96%	0.96%	3.12%	3.234
005.05	Ash, 3h @ 550°C (%)	23	22	6.818	0.2416	0.1686	0.0456	0.1746	2.49%	0.67%	2.58%	3.829
005.11	Ash, NIR (%)	5	5	7.240	1.813	1.793	0.3872	1.834	24.76%	5.35%	25.33%	4.737
005.99	Ash, Miscellaneous (%)	7	7	6.776	0.3478	0.3438	0.0744	0.3518	5.07%	1.10%	5.19%	4.731
006.99	Total Sugars, Miscellaneous (%)	5	5	4.912	1.351	1.346	0.1569	1.356	27.41%	3.19%	27.60%	8.639
008.02	Fiber, Acid Detergent, Crucible (%)	10	10	20.05	0.8328	0.8087	0.2818	0.8563	4.03%	1.41%	4.27%	3.039
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	44	44	19.73	1.204	1.183	0.3188	1.225	6.00%	1.62%	6.21%	3.843
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	9	8	35.02	1.165	1.109	0.2279	1.132	3.15%	0.65%	3.22%	4.967
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	40	38	34.26	1.028	0.9921	0.3062	1.038	2.90%	0.89%	3.03%	3.391
010.11	Moisture, NIR (%)	5	5	8.166	0.8365	0.8330	0.1087	0.8401	10.20%	1.33%	10.29%	7.727
010.99	Moisture, Miscellaneous (%)	17	15	7.904	1.092	0.8143	0.0537	0.8160	10.07%	0.66%	10.10%	15.20
011.01	Loss on Drying, HT, 135°C 2hr (%)	62	57	9.082	0.3957	0.3553	0.0941	0.3675	3.90%	1.03%	4.03%	3.907

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
011.99	Loss on Drying, HT, High Temp. Methods Miscellaneous (%)	6	6	8.948	0.8464	0.8425	0.1148	0.8503	9.42%	1.28%	9.50%	7.406
012.00	Starch, Polarimetric (Ewers) (%)	13	13	14.18	0.6561	0.6386	0.2128	0.6732	4.50%	1.50%	4.75%	3.163
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	10	9	11.73	0.9231	0.5338	0.2945	0.6096	4.46%	2.46%	5.09%	2.070
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	9	9	12.79	1.212	1.162	0.4847	1.259	9.09%	3.79%	9.85%	2.598
013.00	Fat, Pretreat, Acid hydrolysis (%)	17	17	4.886	0.4791	0.4512	0.2278	0.5054	9.23%	4.66%	10.34%	2.219
013.02	Fat, Pretreat, Mojonner, Bak Ext, Acid hydrolysis (%)	16	15	5.407	0.4867	0.4801	0.1134	0.4933	8.88%	2.10%	9.12%	4.350
013.10	Fat, Pretreat, Soxtec-Acid Hydrolysis (%)	6	5	4.527	0.4637	0.4763	0.1384	0.4960	10.68%	3.10%	11.12%	3.583
013.13	Fat, Pretreat, Ankom- Acid Hydrolysis (%)	9	8	4.758	0.3680	0.3655	0.0601	0.3704	7.68%	1.26%	7.79%	6.164
015.43	Aluminum, ICP, Microwave (ppm)	7	6	62.29	26.63	13.80	1.819	13.92	25.82%	3.40%	26.04%	7.652
017.43	Boron, ICP, Microwave (ppm)	7	6	10.53	4.192	3.547	0.1479	3.550	30.74%	1.28%	30.77%	24.00
019.00	Calcium, Ox-Mn04 Vol. (%)	7	5	0.8763	0.1277	0.0353	0.0193	0.0402	3.81%	2.08%	4.34%	2.084
019.08	Calcium, EDTA (%)	8	8	0.9323	0.0467	0.0452	0.0170	0.0483	4.85%	1.82%	5.18%	2.841
019.31	Calcium, AAS, Dry ash (%)	14	11	0.9078	0.1890	0.0762	0.0116	0.0770	8.91%	1.35%	9.01%	6.657
019.41	Calcium, ICP, Dry ash (%)	19	18	0.8862	0.0343	0.0308	0.0238	0.0389	3.47%	2.69%	4.39%	1.633
019.42	Calcium, ICP, Open vessel (%)	20	17	0.9061	0.0553	0.0425	0.0220	0.0478	4.74%	2.45%	5.33%	2.177
019.43	Calcium, ICP, Microwave (%)	36	34	0.8788	0.0567	0.0474	0.0256	0.0538	5.41%	2.92%	6.15%	2.105
019.53	Calcium, ICP-MS, Microwave (%)	5	5	0.9029	0.0391	0.0385	0.0095	0.0396	4.26%	1.05%	4.39%	4.170
019.99	Calcium, Miscellaneous (%)	5	5	0.8744	0.0338	0.0314	0.0176	0.0360	3.59%	2.01%	4.11%	2.043
021.43	Cobalt, ICP, Microwave (ppm)	12	9	1.082	0.1974	0.1983	0.0340	0.2012	18.02%	3.09%	18.28%	5.909
021.53	Cobalt, ICP-MS, Microwave (ppm)	7	7	1.171	0.1101	0.0946	0.0797	0.1237	8.08%	6.81%	10.56%	1.552
022.31	Copper, AAS, Dry ash (ppm)	9	7	19.20	3.750	1.975	0.3882	2.013	9.70%	1.91%	9.89%	5.186
022.41	Copper, ICP, Dry ash (ppm)	15	14	21.76	3.276	1.990	2.183	2.954	9.39%	10.30%	13.94%	1.353
022.42	Copper, ICP, Open vessel (ppm)	21	20	22.89	2.362	1.817	1.010	2.079	8.04%	4.47%	9.20%	2.058
022.43	Copper, ICP, Microwave (ppm)	30	27	21.73	3.046	1.636	0.8788	1.857	7.72%	4.15%	8.76%	2.113
022.53	Copper, ICP-MS, Microwave (ppm)	5	5	24.34	2.857	2.622	1.604	3.074	10.77%	6.59%	12.63%	1.917
025.31	Iron, AAS, Dry ash (ppm)	10	7	222.1	22.59	8.508	3.918	9.367	3.70%	1.70%	4.07%	2.391
025.41	Iron, ICP, Dry ash (ppm)	17	16	224.2	14.36	6.924	9.706	11.92	3.05%	4.28%	5.26%	1.228
025.42	Iron, ICP, Open vessel (ppm)	20	18	221.1	19.92	14.92	5.804	16.01	6.84%	2.66%	7.34%	2.759
025.43	Iron, ICP, Microwave (ppm)	30	26	222.8	20.95	16.97	5.857	17.95	7.53%	2.60%	7.97%	3.066
025.53	Iron, ICP-MS, Microwave (ppm)	6	5	221.6	18.18	17.53	6.808	18.81	7.91%	3.07%	8.49%	2.763
027.31	Magnesium, AAS, Dry ash (%)	7	7	0.3259	0.0098	0.0092	0.0048	0.0104	2.82%	1.48%	3.18%	2.156
027.41	Magnesium, ICP, Dry ash (%)	16	15	0.3217	0.0152	0.0141	0.0093	0.0169	4.40%	2.89%	5.26%	1.822
027.42	Magnesium, ICP, Open vessel (%)	20	19	0.3319	0.0172	0.0167	0.0058	0.0177	5.03%	1.75%	5.33%	3.042
027.43	Magnesium, ICP, Microwave (%)	31	28	0.3202	0.0215	0.0161	0.0064	0.0173	4.98%	1.97%	5.35%	2.720
027.53	Magnesium, ICP-MS, Microwave (%)	5	5	0.3241	0.0228	0.0225	0.0047	0.0230	6.96%	1.45%	7.11%	4.893
028.31	Manganese, AAS, Dry ash (ppm)	10	9	122.8	10.02	9.885	2.274	10.14	8.05%	1.85%	8.26%	4.461
028.41	Manganese, ICP, Dry ash (ppm)	15	14	116.0	4.193	3.608	3.438	4.984	3.11%	2.97%	4.30%	1.450
028.42	Manganese, ICP, Open vessel (ppm)	21	20	121.4	7.541	7.095	3.614	7.962	5.84%	2.98%	6.56%	2.203

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)	32	31	119.0	7.615	6.784	4.363	8.066	5.72%	3.68%	6.80%	1.849
028.53	Manganese, ICP-MS, Microwave (ppm)	6	6	114.9	6.630	6.166	3.444	7.063	5.37%	3.00%	6.15%	2.051
031.01	Phosphorus, Photometric (%)	23	23	0.6270	0.0325	0.0319	0.0089	0.0331	5.09%	1.42%	5.28%	3.715
031.41	Phosphorus, ICP, Dry ash (%)	19	19	0.6407	0.0242	0.0190	0.0211	0.0284	2.97%	3.29%	4.44%	1.347
031.42	Phosphorus, ICP, Open vessel (%)	22	22	0.6435	0.0342	0.0327	0.0139	0.0355	5.08%	2.15%	5.52%	2.562
031.43	Phosphorus, ICP, Microwave (%)	37	34	0.6375	0.0243	0.0211	0.0099	0.0233	3.30%	1.55%	3.65%	2.349
031.99	Phosphorus, Miscellaneous (%)	6	5	0.5198	0.2286	0.0431	0.0104	0.0444	7.05%	1.70%	7.25%	4.261
032.31	Potassium, AAS, Dry ash (%)	6	6	1.101	0.0984	0.0981	0.0106	0.0986	8.91%	0.96%	8.96%	9.305
032.41	Potassium, ICP, Dry ash (%)	17	16	1.131	0.0571	0.0321	0.0348	0.0473	2.81%	3.05%	4.15%	1.360
032.42	Potassium, ICP, Open vessel (%)	20	18	1.181	0.0660	0.0654	0.0191	0.0681	5.53%	1.61%	5.76%	3.572
032.43	Potassium, ICP, Microwave (%)	32	29	1.150	0.0547	0.0530	0.0160	0.0554	4.60%	1.39%	4.80%	3.459
032.53	Potassium, ICP-MS, Microwave (%)	5	5	1.179	0.0243		0.0358			3.04%		
032.99	Potassium, Miscellaneous (%)	5	5	1.156	0.0220	0.0179	0.0181	0.0255	1.55%	1.57%	2.20%	1.405
033.00	Salt as chloride, Sol Cl (%)	10	10	0.4881	0.0834	0.0822	0.0194	0.0845	16.85%	3.96%	17.31%	4.365
033.01	Salt as chloride, Poten Cl (%)	27	25	0.5603	0.0233	0.0173	0.0079	0.0190	3.11%	1.42%	3.42%	2.409
033.99	Salt, Miscellaneous (%)	13	12	0.6996	0.2659	0.2655	0.0205	0.2662	37.94%	2.93%	38.05%	12.99
034.53	Selenium, Total (Se), ICP-MS, Microwave (ppm)	9	8	0.6349	0.0919	0.0400	0.0216	0.0454	6.58%	3.55%	7.48%	2.107
035.31	Sodium, AAS, Dry ash (%)	7	6	0.4081	0.0238	0.0232	0.0073	0.0244	5.70%	1.79%	5.97%	3.329
035.41	Sodium, ICP, Dry ash (%)	17	17	0.4100	0.0167	0.0148	0.0110	0.0184	3.60%	2.67%	4.48%	1.678
035.42	Sodium, ICP, Open vessel (%)	19	18	0.4222	0.0155	0.0132	0.0115	0.0175	3.14%	2.72%	4.15%	1.525
035.43	Sodium, ICP, Microwave (%)	25	23	0.4104	0.0220	0.0214	0.0113	0.0242	5.22%	2.75%	5.89%	2.147
036.42	Sulfur, ICP, Open vessel (%)	16	16	0.5111	0.0291	0.0280	0.0113	0.0302	5.47%	2.20%	5.90%	2.678
036.43	Sulfur, ICP, Microwave (%)	20	17	0.5294	0.0216	0.0146	0.0110	0.0183	2.77%	2.10%	3.47%	1.656
037.31	Zinc, AAS, Dry ash (ppm)	8	7	146.5	12.14	6.087	1.667	6.311	4.05%	1.11%	4.20%	3.785
037.41	Zinc, ICP, Dry ash (ppm)	15	14	151.4	9.827	9.466	5.021	10.72	6.27%	3.32%	7.09%	2.134
037.42	Zinc, ICP, Open vessel (ppm)	21	19	152.2	14.22	11.40	5.597	12.70	7.61%	3.74%	8.48%	2.269
037.43	Zinc, ICP, Microwave (ppm)	33	32	151.0	10.78	10.15	5.112	11.37	6.72%	3.39%	7.53%	2.223
038.42	Molybdenum, ICP, Open vessel (ppm)	6	5	1.747	0.1542	0.0742	0.1911	0.2050	4.25%	10.94%	11.73%	1.073
038.43	Molybdenum, ICP, Microwave (ppm)	11	10	1.620	0.4466	0.4373	0.1282	0.4557	26.99%	7.92%	28.13%	3.554
038.53	Molybdenum, ICP-MS, Microwave (ppm)	6	6	1.779	0.1116	0.1010	0.0673	0.1213	5.68%	3.78%	6.82%	1.804
106.02	Vitamin A, LC (KU / kg)	11	11	17.89	4.400	4.267	1.519	4.529	23.86%	8.49%	25.33%	2.982
109.02	Vitamin E, LC (IU / kg)	10	9	125.4	23.74	10.34	14.44	17.76	7.86%	10.98%	13.50%	1.230
120.00	Alanine, Post-col Ninhydrin Der (%)	14	13	0.8680	0.0200	0.0147	0.0062	0.0160	1.70%	0.72%	1.85%	2.571
120.05	Alanine, Pre-col AQC Der (%)	8	8	0.8711	0.0680	0.0666	0.0196	0.0694	7.64%	2.25%	7.97%	3.540
121.00	Arginine, Post-col Ninhydrin Der (%)	14	13	1.071	0.0334	0.0330	0.0066	0.0337	3.09%	0.61%	3.15%	5.132
121.05	Arginine, Pre-col AQC Der (%)	8	6	1.112	0.0976	0.1067	0.0072	0.1070	9.61%	0.65%	9.63%	14.82
122.00	Aspartic, Post-col Ninhydrin Der (%)	14	14	1.378	0.0271	0.0255	0.0127	0.0285	1.85%	0.92%	2.07%	2.250
122.05	Aspartic, Pre-col AQC Der (%)	8	8	1.414	0.1203	0.1178	0.0343	0.1227	8.33%	2.43%	8.68%	3.575

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
124.00	Cysteine/Cystine, PAO Post-col Ninhydry (%)	14	13	0.3034	0.0084	0.0079	0.0042	0.0089	2.60%	1.38%	2.94%	2.139
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	7	6	0.3079	0.0149	0.0148	0.0018	0.0149	4.81%	0.59%	4.84%	8.150
125.00	Glutamic, Post-col Ninhydry Der (%)	14	13	3.155	0.0588	0.0584	0.0177	0.0610	1.85%	0.56%	1.94%	3.450
125.05	Glutamic, Pre-col AQC Der (%)	8	8	3.166	0.2124	0.1991	0.1049	0.2250	6.29%	3.31%	7.11%	2.145
126.00	Glycine, Post-col Ninhydry Der (%)	14	14	0.8293	0.0221	0.0219	0.0042	0.0223	2.64%	0.51%	2.69%	5.257
126.05	Glycine, Pre-col AQC Der (%)	8	8	0.8517	0.0751	0.0685	0.0437	0.0812	8.04%	5.13%	9.54%	1.858
127.00	Histidine, Post-col Ninhydry Der (%)	14	12	0.4369	0.0180	0.0128	0.0039	0.0134	2.91%	0.88%	3.04%	3.443
127.05	Histidine, Pre-col AQC Der (%)	8	7	0.4481	0.0342	0.0338	0.0067	0.0345	7.55%	1.50%	7.70%	5.127
128.00	Isoleucine, Post-col Ninhydry Der (%)	14	13	0.6090	0.0280	0.0178	0.0053	0.0186	2.95%	0.88%	3.08%	3.512
128.05	Isoleucine, Pre-col AQC Der (%)	8	8	0.6007	0.0449	0.0437	0.0148	0.0461	7.27%	2.46%	7.68%	3.118
129.00	Leucine, Post-col Ninhydry Der (%)	14	12	1.316	0.0322	0.0239	0.0054	0.0245	1.82%	0.41%	1.87%	4.549
129.05	Leucine, Pre-col AQC Der (%)	8	7	1.277	0.0901	0.0481	0.0311	0.0573	3.69%	2.39%	4.40%	1.842
130.00	L-Lysine, Post-col Ninhydry Der (%)	15	15	0.7179	0.0374	0.0368	0.0089	0.0379	5.13%	1.23%	5.28%	4.278
130.05	L-Lysine, Pre-col AQC Der (%)	8	8	0.7229	0.0529	0.0518	0.0146	0.0538	7.17%	2.02%	7.45%	3.691
131.00	Methionine, PAO Post-col Ninhydry Der (%)	15	14	0.2613	0.0113	0.0111	0.0039	0.0118	4.27%	1.50%	4.53%	3.011
131.05	Methionine, PAO Pre-col AQC Der (%)	7	7	0.2667	0.0102	0.0094	0.0055	0.0109	3.54%	2.07%	4.11%	1.979
132.00	Phenylalanine, Post-col Ninhydry Der (%)	14	13	0.7816	0.0248	0.0242	0.0073	0.0253	3.10%	0.93%	3.24%	3.484
132.05	Phenylalanine, Pre-col AQC Der (%)	8	6	0.7702	0.0791	0.0796	0.0071	0.0799	10.50%	0.93%	10.54%	11.28
133.00	Proline, Post-col Ninhydry Der (%)	14	12	1.060	0.0475	0.0492	0.0082	0.0499	4.64%	0.78%	4.71%	6.066
133.05	Proline, Pre-col AQC Der (%)	8	8	1.082	0.0646	0.0613	0.0288	0.0678	5.67%	2.66%	6.26%	2.352
134.00	Serine, Post-col Ninhydry Der (%)	14	12	0.7958	0.0278	0.0111	0.0067	0.0129	1.39%	0.84%	1.63%	1.941
134.05	Serine, Pre-col AQC Der (%)	8	6	0.8086	0.0545	0.0590	0.0103	0.0599	7.32%	1.27%	7.42%	5.843
135.00	Threonine, Post-col Ninhydry Der (%)	14	13	0.5940	0.0177	0.0146	0.0043	0.0152	2.47%	0.73%	2.57%	3.504
135.05	Threonine, Pre-col AQC Der (%)	8	6	0.6047	0.0252	0.0122	0.0069	0.0140	2.05%	1.15%	2.35%	2.040
136.03	Tryptophan, Alka-Hydrol + IS RP LC FI (%)	7	6	0.2472	0.0236	0.0183	0.0015	0.0183	7.59%	0.64%	7.62%	11.89
137.00	Tyrosine, Post-col Ninhydry Der (%)	12	12	0.5362	0.0340	0.0328	0.0127	0.0352	6.13%	2.36%	6.57%	2.778
137.05	Tyrosine, Pre-col AQC Der (%)	8	8	0.5435	0.0732	0.0724	0.0153	0.0740	13.32%	2.82%	13.62%	4.833
138.00	Valine, Post-col Ninhydry Der (%)	14	13	0.7940	0.0325	0.0215	0.0060	0.0224	2.74%	0.76%	2.84%	3.749
138.05	Valine, Pre-col AQC Der (%)	8	8	0.7672	0.0714	0.0698	0.0215	0.0730	9.09%	2.81%	9.52%	3.390
365.03	Monensin, LC-PCD (ppm)	10	10	36.53	3.428	3.368	0.8988	3.486	9.22%	2.46%	9.54%	3.879
365.05	Monensin, LC-MS/MS (ppm)	13	13	38.17	4.416	4.123	2.238	4.691	10.80%	5.86%	12.29%	2.096
400.01	Water Activity, Aqualab chilled mirror (Units)	12	10	0.4506	0.0386	0.0282	0.0097	0.0299	6.15%	2.12%	6.51%	3.065
400.99	Water Activity, Miscellaneous (Units)	5	5	0.5183	0.1115	0.1114	0.0055	0.1115	21.49%	1.06%	21.52%	20.39
520.43	Chromium, Total (Cr), ICP, Microwave (ppm)	8	6	2.267	0.5817	0.5813	0.0301	0.5820	25.65%	1.33%	25.68%	19.37
520.53	Chromium, Total (Cr), ICP-MS, Microwave (ppm)	5	5	1.852	0.6594	0.6544	0.1141	0.6643	35.34%	6.16%	35.87%	5.824
539.43	Nickel, ICP, Microwave (ppm)	5	5	2.403	0.7633	0.7631	0.0276	0.7636	31.76%	1.15%	31.78%	27.67

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