



AAFCO
Association of American Feed Control Officials



Animal Feed Scheme

Cattle Mineral

Test Material Code # 202592

Analyte Summary Report

Labs Reporting: 138

Analytes Reported: 101

Issue Date : 01/31/2026

Analyte Group Code	Analyte and Method	Total # Tests Submitted	# Tests 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	Loss on Drying (%)	44	43	3.870	0.3528	3.874	0.2401	0.0458	6.20%	0.1421	3.26%
002	Protein, Crude (%)	51	47	2.693	1.368	2.467	0.3571	0.0651	14.47%	0.1834	3.49%
003	Fat, Crude (%)	31	29	1.220	0.8780	1.078	0.2075	0.0482	19.25%	0.0983	3.95%
004	Fiber, Crude (%)	19	19	7.306	9.994	4.482	0.9398	0.2695	20.97%	0.2686	3.19%
005	Ash (%)	100	98	69.92	8.461	71.40	1.671	0.2110	2.34%	0.5267	1.18%
006	Total Sugars (%)	2	2	5.704	1.561						
008	Fiber, Acid Detergent (%)	7	6	5.721	1.662	5.534	1.430	0.7297	25.84%	0.4787	3.09%
009	Fiber, Neutral Detergent (%)	7	7	9.793	3.349	9.542	3.199	1.512	33.53%	0.4342	2.85%
010	Moisture (%)	18	18	4.170	1.504	3.944	0.6292	0.1854	15.95%	0.2076	3.25%
011	Loss on Drying, HT (%)	59	57	4.820	0.5115	4.845	0.3415	0.0565	7.05%	0.1476	3.15%
012	Starch (%)	9	9	0.7278	0.4133	0.6885	0.3720	0.1550	54.03%	0.2216	4.23%
013	Fat, Pretreat (%)	17	16	2.112	0.9923	2.101	1.018	0.3182	48.47%	0.2115	3.58%
015	Aluminum (ppm)	13	12	943.6	200.0	944.4	225.0	81.20	23.83%	30.30	5.71%
017	Boron (ppm)	13	13	14.27	11.32	12.41	7.174	2.487	57.81%	1.283	10.95%
019	Calcium (%)	118	118	12.20	0.8814	12.20	0.7231	0.0832	5.93%	0.3691	2.75%
021	Cobalt (ppm)	27	27	50.00	9.999	50.04	11.00	2.647	21.99%	1.808	8.88%
022	Copper (ppm)	92	91	1,265	142.7	1,261	107.4	14.07	8.52%	32.82	5.46%
024	Iodine (ppm)	2	2	33.36	12.46						
025	Iron (ppm)	66	64	6,823	830.8	6,839	693.0	108.3	10.13%	154.5	4.24%
027	Magnesium (%)	93	92	10.84	1.374	10.95	0.7814	0.1018	7.14%	0.3222	2.79%
028	Manganese (ppm)	69	69	1,911	209.4	1,905	164.4	24.75	8.63%	51.80	5.13%
031	Phosphorus (%)	113	112	2.696	0.3427	2.685	0.1873	0.0221	6.97%	0.0891	3.45%
032	Potassium (%)	55	53	0.7310	0.1678	0.7092	0.0863	0.0148	12.17%	0.0339	4.21%
033	Salt as chloride (%)	48	47	15.57	3.390	16.41	0.8061	0.1470	4.91%	0.3647	2.47%
034	Selenium, Total (Se) (ppm)	31	28	20.02	3.113	19.79	2.430	0.5740	12.28%	0.7206	10.21%
035	Sodium (%)	71	70	6.344	0.5097	6.364	0.3839	0.0574	6.03%	0.1747	3.03%
036	Sulfur (%)	42	41	0.5059	0.1065	0.5225	0.0736	0.0144	14.09%	0.0208	4.41%
037	Zinc (ppm)	91	91	2,422	282.0	2,417	218.5	28.63	9.04%	66.45	4.95%
038	Molybdenum (ppm)	18	18	7.176	1.914	7.289	1.896	0.5587	26.01%	0.4561	11.86%

Analyte Group Code	Analyte and Method	Total # Tests Submitted	# Tests 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
040	Barium (ppm)	3	3	22.53	3.015	22.53	3.015	1.741	13.38%	0.6502	10.01%
041	Vanadium (ppm)	1	1	17.46							
042	Chloride (%)	7	7	10.41	2.304	9.973	0.8213	0.3880	8.23%	0.5395	2.83%
095	Methoprene (ppm)	2	2	12.60	3.084						
101	Choline Chloride (ppm)	1	1	154.0							
102	Niacin (ppm)	1	1	6.185							
103	Pantothenic Acid (ppm)	1	1	3.890							
104	Riboflavin (ppm)	2	1	0.2050							
105	Thiamine (ppm)	2	1	0.0950							
106	Vitamin A (KU / kg)	17	17	127.0	22.49	126.2	22.42	6.798	17.76%	13.38	
107	Vitamin B12 (ppb)	1		4.400							
108	Vitamin D3 (KU / kg)	7	5	16.73	3.486	16.73	3.486	1.949	20.83%	1.586	
109	Vitamin E (IU / kg)	14	13	249.3	58.31	241.9	47.35	16.42	19.57%	6.936	
111	Vitamin C, Phosphorylated (ppm)	1		4.400							
113	Folic Acid (ppm)	1	1	0.1065							
114	Biotin (ppm)	1		0.0400							
115	Non Protein N (NPN) (%)	2	2	0.5080	0.2729						
120	Alanine (%)	8	7	0.0958	0.0303	0.0887	0.0154	0.0073	17.36%	0.0059	5.76%
121	Arginine (%)	8	7	0.0797	0.0153	0.0797	0.0173	0.0082	21.76%	0.0056	5.85%
122	Aspartic (%)	8	7	0.2105	0.0241	0.2116	0.0246	0.0116	11.61%	0.0106	5.05%
124	Cysteine/Cystine (%)	8	6	0.0618	0.0816	0.0344	0.0190	0.0097	55.16%	0.0049	6.64%
125	Glutamic (%)	8	8	0.2848	0.0553	0.2792	0.0490	0.0216	17.54%	0.0184	4.85%
126	Glycine (%)	8	8	0.1215	0.0182	0.1219	0.0196	0.0087	16.11%	0.0050	5.49%
127	Histidine (%)	8	5	0.0325	0.0121	0.0325	0.0121	0.0068	37.23%	0.0026	6.70%
128	Isoleucine (%)	8	8	0.0714	0.0155	0.0708	0.0162	0.0072	22.88%	0.0038	5.96%
129	Leucine (%)	8	8	0.1231	0.0515	0.1107	0.0234	0.0103	21.10%	0.0079	5.57%
130	L-Lysine (%)	8	7	0.0702	0.0095	0.0702	0.0108	0.0051	15.37%	0.0055	5.97%
131	Methionine (%)	8	3	0.0439	0.0535	0.0439	0.0535	0.0386	121.99%	0.0094	6.40%
132	Phenylalanine (%)	8	6	0.0736	0.0202	0.0736	0.0229	0.0117	31.04%	0.0075	5.92%
133	Proline (%)	8	7	0.1004	0.0416	0.0978	0.0412	0.0195	42.10%	0.0095	5.68%
134	Serine (%)	8	7	0.0874	0.0122	0.0868	0.0125	0.0059	14.34%	0.0052	5.78%
135	Threonine (%)	8	7	0.0650	0.0126	0.0642	0.0123	0.0058	19.23%	0.0052	6.05%
136	Tryptophan (%)	7	4	0.0177	0.0017	0.0177	0.0017	0.0010	9.46%	0.0005	7.34%
137	Tyrosine (%)	8	7	0.0598	0.0123	0.0581	0.0097	0.0046	16.75%	0.0058	6.14%
138	Valine (%)	8	8	0.0908	0.0183	0.0908	0.0207	0.0092	22.84%	0.0066	5.74%
139	Taurine (%)	2	1	0.0235							
160	Fructose (%)	1	1	0.4000							
162	Glucose (%)	1		0.1500							
163	Lactose (%)	1		0.1500							
164	Maltose (%)	1		0.1500							

Analyte Group Code	Analyte and Method	Total # Tests Submitted	# Tests 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
165	Sucrose (%)	1	1	3.480							
166	Raffinose (%)	1		0.0500							
167	Stachyose (%)	1	1	0.0800							
400	Water Activity (Units)	12	11	0.4685	0.0135	0.4685	0.0153	0.0058	3.27%	0.0059	
516	Arsenic, Total (As) (ppm)	8	7	1.637	0.2385	1.637	0.2704	0.1278	16.52%	0.0960	14.85%
518	Cadmium (ppm)	11	11	0.8008	0.2443	0.7497	0.1185	0.0447	15.81%	0.0386	16.71%
520	Chromium, Total (Cr) (ppm)	12	12	84.26	22.29	84.25	25.28	9.121	30.00%	3.630	8.21%
526	Lead (ppm)	11	10	1.127	0.1964	1.114	0.1923	0.0760	17.27%	0.1047	15.74%
529	Mercury (ppb)	4	3	230.1	389.7	230.1	389.7	225.0	169.38%	0.4368	19.96%
539	Nickel (ppm)	7	6	34.79	12.56	34.79	14.25	7.270	40.95%	0.8284	9.38%
706	Caprylic acid (8:0) (% (w/w))	1	1	1.375							
708	Capric acid (10:0) (% (w/w))	1	1	0.2200							
710	Lauric Acid (12:0) (% (w/w))	1	1	0.1250							
714	Myristic Acid (14:0) (% (w/w))	1	1	1.825							
716	Palmitic Acid (16:0) (% (w/w))	1	1	24.85							
718	Palmitoleic Acid (9c-16:1) (% (w/w))	1	1	1.945							
722	Stearic Acid (18:0) (% (w/w))	1	1	8.850							
724	Oleic Acid (9c-18:1) (% (w/w))	1	1	24.95							
726	Linoleic Acid (9c,12c-18:2) (% (w/w))	1	1	2.735							
728	alpha-Linolenic Acid (9c,12c,15c-18:3) (% (w/w))	1	1	0.2750							
730	Arachidic Acid (20:0) (% (w/w))	1	1	0.2900							
740	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5) (% (w/w))	1		0.0500							
742	Behenic Acid (22:0) (% (w/w))	1	1	0.3050							
744	Erucic Acid (13c-22:1) (% (w/w))	1	1	0.2150							
746	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5) (% (w/w))	1		0.0500							
748	Lignoceric Acid (24:0) (% (w/w))	1		0.0500							
750	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6) (% (w/w))	1	1	0.8800							
754	Total n-3 Polyunsaturated (Omega-3) Fatty Acids (% (w/w))	1	1	0.0150							
756	Total n-6 Polyunsaturated (Omega-6) Fatty Acids (% (w/w))	1	1	0.0350							
758	Total Saturated Fatty Acids (% (w/w))	1	1	38.82							
762	Total Monounsaturated Fatty Acids (% (w/w))	1	1	29.55							
766	Total Polyunsaturated Fatty Acids (% (w/w))	1	1	4.140							

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.