



AAFCO
Proficiency Testing Program



Animal Feed Scheme

Llama Feed

Test Material Code # 201931

Analyte Summary Report

Labs Reporting: 184

Analytes Reported: 109

Issue Date : 12/31/2019

Analyte Group Code	Analyte and Method	Total # Tests Submitted	# Tests in Robust Calcs	Raw Mean	Raw SD	Assigned Value Robust Mean	AAFCO #fp Robust SD	Uncertainty (U) Robust	% RSD - Robust	Average Range (R-bar)	Thompson Horwitz %RSD
000	Urea (%)	1	1	6.150							
001	Loss on Drying (%)	81	78	7.780	0.4037	7.800	0.2765	0.0391	3.54%	0.0848	2.94%
002	Protein, Crude (%)	187	185	23.98	0.8441	23.90	0.4052	0.0372	1.70%	0.1802	2.05%
003	Fat, Crude (%)	142	137	2.403	0.2982	2.394	0.2295	0.0245	9.59%	0.0937	3.51%
004	Fiber, Crude (%)	123	122	16.81	2.773	17.19	1.293	0.1464	7.52%	0.2386	2.41%
005	Ash (%)	141	136	16.67	1.031	16.74	0.2562	0.0275	1.53%	0.1185	2.44%
006	Total Sugars (%)	5	4	3.723	2.409	3.723	2.409	1.205	64.71%	0.0450	3.28%
008	Fiber, Acid Detergent (%)	62	60	22.98	1.716	22.94	1.716	0.2770	7.48%	0.3778	2.09%
009	Fiber, Neutral Detergent (%)	59	58	34.02	2.829	34.14	1.993	0.3271	5.84%	0.4819	1.71%
010	Moisture (%)	23	22	7.977	0.6530	7.919	0.5069	0.1351	6.40%	0.1068	2.93%
011	Loss on Drying (%)	69	68	8.866	0.3928	8.884	0.4025	0.0610	4.53%	0.1263	2.88%
012	Starch (%)	36	35	6.663	1.383	6.717	0.9968	0.2106	14.84%	0.1760	3.00%
013	Fat, Acid Pretreat (%)	51	50	3.508	0.6306	3.509	0.5971	0.1055	17.02%	0.1834	3.31%
015	Aluminum (ppm)	16	16	1,524	478.5	1,579	413.2	129.1	26.17%	36.37	5.28%
017	Boron (ppm)	17	16	21.70	2.278	21.64	2.312	0.7226	10.68%	1.266	10.07%
019	Calcium (%)	141	139	2.132	0.1676	2.141	0.1129	0.0120	5.27%	0.0545	3.57%
021	Cobalt (ppm)	28	28	5.828	2.219	5.559	1.351	0.3191	24.30%	0.2675	12.36%
022	Copper (ppm)	95	93	52.69	7.579	52.66	6.264	0.8119	11.90%	1.828	8.81%
025	Iron (ppm)	91	89	1,187	252.1	1,217	204.1	27.04	16.77%	44.46	5.49%
027	Magnesium (%)	101	99	0.4112	0.0451	0.4114	0.0242	0.0030	5.89%	0.0103	4.57%
028	Manganese (ppm)	97	95	475.4	39.43	477.9	32.24	4.134	6.75%	16.26	6.32%
031	Phosphorus (%)	134	132	1.217	0.0934	1.222	0.0613	0.0067	5.02%	0.0294	3.88%
032	Potassium (%)	100	96	1.707	0.1569	1.708	0.0911	0.0116	5.33%	0.0423	3.69%
033	Salt as chloride (%)	74	73	3.626	0.2668	3.658	0.1841	0.0269	5.03%	0.0603	3.29%
034	Selenium (ppm)	30	28	10.60	1.906	10.65	1.782	0.4209	16.74%	0.3369	11.21%
035	Sodium (%)	97	94	1.231	0.1351	1.235	0.0846	0.0109	6.85%	0.0327	3.87%
036	Sulfur (%)	42	41	0.5503	0.0654	0.5523	0.0362	0.0071	6.56%	0.0138	4.37%
037	Zinc (ppm)	101	100	1,591	287.9	1,611	154.1	19.27	9.57%	52.04	5.26%
038	Molybdenum (ppm)	22	21	19.07	2.119	19.13	2.279	0.6218	11.92%	1.108	10.26%

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040	Barium (ppm)	1	1	37.77							
041	Vanadium (ppm)	1	1	4.355							
042	Chloride (%)	6	6	2.179	0.0958	2.179	0.1086	0.0554	4.99%	0.0452	3.56%
101	Choline Chloride (ppm)	1	1	1,020							
102	Niacin (ppm)	1	1	66.25							
103	Pantothenic Acid (ppm)	1	1	22.05							
104	Riboflavin (ppm)	4	4	4.859	1.191	4.859	1.191	0.5956	24.51%	0.3775	12.61%
105	Thiamine (ppm)	3	3	142.5	56.97	142.5	56.97	32.89	39.98%	5.160	7.58%
106	Vitamin A (KU / kg)	22	21	73.09	13.84	72.86	13.28	3.623	18.23%	5.875	
107	Vitamin B12 (ppb)	1	1	22.55							
108	Vitamin D3 (KU / kg)	8	7	18.92	3.731	18.99	4.074	1.925	21.45%	1.112	
109	Vitamin E (IU / kg)	18	18	3,133	556.9	3,219	405.6	119.5	12.60%	78.00	
112	Pyridoxine (µg / g)	1	1	4.585							
113	Folic Acid (ppm)	1	1	4.465							
114	Biotin (ppm)	1	1	0.8140							
115	Non Protein N (NPN) (%)	7	7	4.690	3.522	4.690	3.994	1.887	85.15%	0.1029	3.17%
118	Peroxide value (meq/kg)	1	1	5.215							
120	Alanine (%)	34	34	0.8242	0.2069	0.7971	0.0605	0.0130	7.59%	0.0181	4.14%
121	Arginine (%)	33	32	1.078	0.1779	1.044	0.0622	0.0137	5.96%	0.0191	3.97%
122	Aspartic (%)	33	33	1.708	0.2618	1.665	0.0928	0.0202	5.57%	0.0469	3.70%
124	Cysteine/Cystine (%)	35	34	0.2561	0.0592	0.2578	0.0333	0.0071	12.92%	0.0125	4.90%
125	Glutamic (%)	34	34	2.760	0.3807	2.704	0.2564	0.0550	9.48%	0.0742	3.44%
126	Glycine (%)	34	34	0.8330	0.1754	0.8104	0.0434	0.0093	5.36%	0.0191	4.13%
127	Histidine (%)	34	33	0.4097	0.0725	0.3986	0.0301	0.0065	7.54%	0.0101	4.59%
128	Isoleucine (%)	35	34	0.6498	0.1130	0.6403	0.0597	0.0128	9.32%	0.0161	4.28%
129	Leucine (%)	35	34	1.184	0.2277	1.136	0.0603	0.0129	5.31%	0.0203	3.92%
130	L-Lysine (%)	36	36	0.8808	0.1467	0.8588	0.0581	0.0121	6.76%	0.0286	4.09%
131	Methionine (%)	35	33	0.3561	0.0759	0.3609	0.0348	0.0076	9.65%	0.0154	4.66%
132	Phenylalanine (%)	35	35	0.7734	0.1173	0.7521	0.0499	0.0106	6.64%	0.0193	4.17%
133	Proline (%)	33	32	0.9825	0.3220	0.9100	0.0551	0.0122	6.06%	0.0191	4.06%
134	Serine (%)	34	34	0.8169	0.1193	0.7903	0.0584	0.0125	7.39%	0.0231	4.14%
135	Threonine (%)	34	34	0.6600	0.1212	0.6326	0.0386	0.0083	6.10%	0.0163	4.29%
136	Tryptophan (%)	23	22	0.2289	0.0794	0.2211	0.0358	0.0095	16.19%	0.0054	5.02%
137	Tyrosine (%)	28	27	0.5325	0.1422	0.5168	0.0943	0.0227	18.25%	0.0269	4.42%
138	Valine (%)	35	35	0.8051	0.1563	0.7780	0.0725	0.0153	9.32%	0.0224	4.15%
139	Taurine (%)	5	3	0.0418	0.0435	0.0418	0.0435	0.0251	103.94%	0.0003	6.45%
140	Lysine Free (%)	1	1	0.8166							
141	Methionine Free (%)	1	1	0.4123							
160	Fructose (%)	2	2	0.3938	0.4048						
161	Galactose (%)	1		0.0000							

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162	Glucose (%)	2	2	0.1965	0.1464						
163	Lactose (%)	2		0.0000							
164	Maltose (%)	2	1	0.1055							
165	Sucrose (%)	2	2	1.958	0.2570						
166	Raffinose (%)	2	2	0.5250	0.0354						
167	Stachyose (%)	2	2	0.7475	0.0318						
400	Water Activity (Units)	10	9	0.5095	0.0372	0.5029	0.0242	0.0101	4.82%	0.0030	
412	Starch, Dietary (%)	1	1	5.925							
516	Arsenic, Total (ppm)	9	7	0.4706	0.0372	0.4716	0.0399	0.0189	8.46%	0.0133	17.91%
518	Cadmium (ppm)	12	11	0.2914	0.0513	0.3013	0.0284	0.0107	9.44%	0.0105	19.16%
520	Chromium (ppm)	12	11	12.99	4.009	12.99	4.546	1.713	35.00%	0.3670	10.88%
526	Lead (ppm)	12	11	1.204	0.2153	1.200	0.2344	0.0884	19.54%	0.1282	15.56%
529	Mercury (ppb)	4	3	21.74	32.70	21.74	32.70	18.88	150.46%	3.102	22.00%
539	Nickel (ppm)	7	7	5.982	1.247	6.186	0.8968	0.4237	14.50%	0.2717	12.16%
710	Lauric Acid (12:0) (%) (w/w)	3	1								
714	Myristic Acid (14:0) (%) (w/w)	3	2	0.2725	0.3712	0.2725	0.3712	0.2625	136.23%	0.0060	
716	Palmitic Acid (16:0) (%) (w/w)	3	3	6.260	10.06	6.260	10.06	5.810	160.74%	0.1467	
718	Palmitoleic Acid (9c-16:1) (%) (w/w)	4	3	0.1163	0.1764	0.1163	0.1764	0.1019	151.65%	0.0147	
720	Margaric acid (17:0) (%) (w/w)	1	1	0.3200							
722	Stearic Acid (18:0) (%) (w/w)	3	3	1.944	3.158	1.944	3.158	1.823	162.49%	0.0703	
724	Oleic Acid (9c-18:1) (%) (w/w)	3	3	5.852	9.499	5.852	9.499	5.484	162.32%	0.0353	
726	Linoleic Acid (9c,12c-18:2) (%) (w/w)	5	4	0.9760	0.0319	0.9760	0.0319	0.0159	3.26%	0.0210	
728	alpha-Linolenic Acid (9c,12c,15c-18:3) (%) (w/w)	4	3	0.1342	0.0081	0.1342	0.0081	0.0047	6.04%	0.0030	
730	Arachidic Acid (20:0) (%) (w/w)	3	2	0.2358	0.3171	0.2358	0.3171	0.2243	134.52%	0.0305	
732	Gondoic Acid (11c-20:1) (%) (w/w)	2	1	0.0090							
736	Arachidonic Acid (5c,8c,11c,14c-20:4) (%) (w/w)	1		0.0000							
740	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5) (%) (w/w)	2		0.0000							
742	Behenic Acid (22:0) (%) (w/w)	3	2	0.2533	0.3348	0.2533	0.3348	0.2368	132.21%	0.0115	
744	Erucic Acid (13c-22:1) (%) (w/w)	1		0.0050							
746	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5) (%) (w/w)	1		0.0050							
748	Lignoceric Acid (24:0) (%) (w/w)	2	2	0.2268	0.2874						
750	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6) (%) (w/w)	2	1	0.3750							
752	Nervonic Acid (24:1) isomers (%) (w/w)	1		0.0050							
754	Total n-3 Polyunsaturated (Omega-3) Fatty Acids (%) (w/w)	3	3	0.1398	0.0098	0.1398	0.0098	0.0056	6.97%	0.0010	
756	Total n-6 Polyunsaturated (Omega-6) Fatty Acids (%) (w/w)	3	3	0.9800	0.0427	0.9800	0.0427	0.0247	4.36%	0.0140	
758	Total Saturated Fatty Acids (%) (w/w)	1	1	0.7050							
762	Total Monounsaturated Fatty Acids (%) (w/w)	1	1	0.4450							
766	Total Polyunsaturated Fatty Acids (%) (w/w)	1	1	1.090							
770	Total Fat (equivalent to NLEA) (%) (w/w)	1	1	2.370							
772	Total Fatty Acids (%) (w/w)	2	2	2.138	0.1863						

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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.