



**AAFCO**  
Proficiency Testing Program



**Animal Feed Scheme**

**Tortoise Feed**

**Test Material Code # 202031**

**Analyte Summary Report**

**# Labs Reporting: 178**

**# Analytes Reported: 115**

**Issue Date : 12/31/2020**

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	0.3500							
001	Loss on Drying (%)	82	80	8.439	0.4250	8.502	0.2032	0.0284	2.39%	0.0873	2.90%
002	Protein, Crude (%)	174	169	15.45	0.2818	15.45	0.2182	0.0210	1.41%	0.1084	2.54%
003	Fat, Crude (%)	142	138	2.393	0.2948	2.364	0.1596	0.0170	6.75%	0.0878	3.51%
004	Fiber, Crude (%)	120	119	14.45	1.156	14.45	0.7346	0.0842	5.09%	0.2905	2.63%
005	Ash (%)	137	132	7.086	0.2953	7.085	0.2768	0.0301	3.91%	0.0725	2.98%
006	Total Sugars (%)	7	7	5.103	1.364	4.749	0.5813	0.2746	12.24%	0.1543	3.16%
008	Fiber, Acid Detergent (%)	60	59	17.86	0.8060	17.87	0.8609	0.1401	4.82%	0.3262	2.37%
009	Fiber, Neutral Detergent (%)	58	56	27.37	1.255	27.30	1.231	0.2057	4.51%	0.3683	1.91%
010	Moisture (%)	18	17	8.639	0.7915	8.532	0.5097	0.1545	5.97%	0.1123	2.90%
011	Loss on Drying (%)	71	69	9.132	0.3600	9.129	0.2562	0.0385	2.81%	0.0975	2.87%
012	Starch (%)	34	32	25.79	2.547	25.67	2.257	0.4987	8.79%	0.3356	1.97%
013	Fat, Acid Pretreat (%)	50	49	4.466	0.5899	4.480	0.5268	0.0941	11.76%	0.1891	3.19%
015	Aluminum (ppm)	20	20	139.4	33.08	144.2	20.37	5.694	14.13%	4.116	7.57%
017	Boron (ppm)	22	21	15.26	2.799	14.67	0.8394	0.2290	5.72%	0.4786	10.68%
019	Calcium (%)	137	134	1.312	0.0852	1.307	0.0594	0.0064	4.55%	0.0333	3.84%
021	Cobalt (ppm)	21	19	0.8611	0.2803	0.8369	0.2050	0.0588	24.49%	0.0720	16.43%
022	Copper (ppm)	90	87	17.86	2.327	17.66	1.714	0.2297	9.70%	0.6745	10.38%
024	Iodine (ppm)	3	3	1.265	0.0726	1.265	0.0726	0.0419	5.74%	0.1247	15.44%
025	Iron (ppm)	85	83	400.8	51.08	408.9	31.17	4.277	7.62%	11.96	6.47%
027	Magnesium (%)	92	91	0.2161	0.0143	0.2164	0.0118	0.0015	5.44%	0.0063	5.04%
028	Manganese (ppm)	93	91	125.8	13.18	127.0	10.00	1.311	7.88%	5.658	7.72%
031	Phosphorus (%)	131	128	0.6823	0.0408	0.6834	0.0289	0.0032	4.23%	0.0142	4.24%
032	Potassium (%)	94	93	1.069	0.0727	1.075	0.0609	0.0079	5.66%	0.0306	3.96%
033	Salt as chloride (%)	56	56	1.055	0.2080	1.099	0.0669	0.0112	6.09%	0.0235	3.94%
034	Selenium (ppm)	18	16	0.5725	0.1886	0.5504	0.1397	0.0437	25.39%	0.0436	17.50%
035	Sodium (%)	96	95	0.3811	0.0386	0.3837	0.0271	0.0035	7.07%	0.0117	4.62%
036	Sulfur (%)	52	49	0.2098	0.0178	0.2092	0.0174	0.0031	8.30%	0.0062	5.06%
037	Zinc (ppm)	94	92	130.6	13.81	130.0	11.22	1.462	8.63%	4.972	7.69%

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038	Molybdenum (ppm)	21	20	2.070	0.2703	2.054	0.2630	0.0735	12.80%	0.1500	14.35%
040	Barium (ppm)	4	4	5.769	0.9243	5.769	0.9243	0.4621	16.02%	0.2978	12.29%
041	Vanadium (ppm)	3	3	2.339	0.9142	2.339	0.9142	0.5278	39.08%	0.2332	14.08%
042	Chloride (%)	7	7	0.7138	0.0596	0.7117	0.0628	0.0297	8.82%	0.0164	4.21%
099	Menadione (form) (ppm)	1	1	0.6000							
101	Choline Chloride (ppm)	2	2	2,128	321.7						
102	Niacin (ppm)	4	4	79.11	51.07	79.11	51.07	25.54	64.55%	2.125	8.29%
103	Pantothenic Acid (ppm)	4	3	36.90	2.408	36.90	2.408	1.390	6.52%	0.8267	9.29%
104	Riboflavin (ppm)	7	7	14.45	2.572	14.45	2.917	1.378	20.19%	0.8986	10.70%
105	Thiamine (ppm)	6	6	6.726	2.235	6.726	2.534	1.293	37.68%	0.6017	12.01%
106	Vitamin A (KU / kg)	19	19	2.874	0.7435	2.814	0.6533	0.1873	23.21%	0.2509	
107	Vitamin B12 (ppb)	2	2	96.43	89.20						
108	Vitamin D3 (KU / kg)	7	7	2.075	0.4110	2.075	0.4661	0.2202	22.46%	0.3071	
109	Vitamin E (IU / kg)	19	18	195.5	46.76	197.1	43.82	12.91	22.23%	9.636	
111	Vitamin C, Phosphorylated (ppm)	1		4.400							
112	Pyridoxine (µg / g)	4	4	8.324	2.090	8.324	2.090	1.045	25.11%	0.2625	11.63%
113	Folic Acid (ppm)	3	3	2.080	0.5197	2.080	0.5197	0.3000	24.99%	0.1400	14.33%
114	Biotin (ppm)	3	3	0.7237	0.5298	0.7237	0.5298	0.3059	73.21%	0.1327	16.79%
115	Non Protein N (NPN) (%)	1	1	0.2900							
118	Peroxide value (meq/kg)	1	1	5.490							
120	Alanine (%)	35	34	0.7201	0.0267	0.7193	0.0261	0.0056	3.62%	0.0138	4.20%
121	Arginine (%)	34	33	0.9229	0.0522	0.9250	0.0367	0.0080	3.97%	0.0193	4.05%
122	Aspartic (%)	35	35	1.492	0.0792	1.493	0.0607	0.0128	4.07%	0.0320	3.77%
124	Cysteine/Cystine (%)	35	34	0.2765	0.0903	0.2608	0.0297	0.0064	11.40%	0.0079	4.90%
125	Glutamic (%)	35	35	2.488	0.1233	2.487	0.1148	0.0243	4.62%	0.0471	3.49%
126	Glycine (%)	35	34	0.7783	0.0367	0.7801	0.0239	0.0051	3.06%	0.0127	4.15%
127	Histidine (%)	36	36	0.3882	0.0323	0.3866	0.0212	0.0044	5.47%	0.0106	4.61%
128	Isoleucine (%)	36	35	0.5964	0.0426	0.5975	0.0389	0.0082	6.51%	0.0161	4.32%
129	Leucine (%)	36	35	1.149	0.0435	1.150	0.0369	0.0078	3.21%	0.0186	3.92%
130	L-Lysine (%)	38	38	0.8250	0.0431	0.8259	0.0326	0.0066	3.95%	0.0197	4.12%
131	Methionine (%)	37	37	0.3160	0.0675	0.3035	0.0286	0.0059	9.42%	0.0101	4.79%
132	Phenylalanine (%)	35	35	0.6904	0.0405	0.6920	0.0352	0.0074	5.08%	0.0169	4.23%
133	Proline (%)	34	34	0.8550	0.0768	0.8606	0.0562	0.0121	6.53%	0.0186	4.09%
134	Serine (%)	35	35	0.7503	0.0562	0.7516	0.0408	0.0086	5.42%	0.0135	4.18%
135	Threonine (%)	35	34	0.5542	0.0311	0.5584	0.0156	0.0033	2.80%	0.0116	4.37%
136	Tryptophan (%)	24	23	0.1931	0.0425	0.1938	0.0255	0.0066	13.15%	0.0035	5.12%
137	Tyrosine (%)	29	28	0.5093	0.0773	0.5127	0.0724	0.0171	14.13%	0.0169	4.42%
138	Valine (%)	35	35	0.6895	0.0486	0.6956	0.0385	0.0081	5.54%	0.0153	4.22%
139	Taurine (%)	6	3	0.0850	0.0760	0.0850	0.0760	0.0549	89.41%	0.0033	5.80%
160	Fructose (%)	3	3	0.3975	0.1938	0.3975	0.1938	0.1119	48.74%	0.0243	4.60%

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161	Galactose (%)	1		0.0000							
162	Glucose (%)	4	3	0.2008	0.0753	0.2008	0.0753	0.0435	37.47%	0.0130	5.09%
163	Lactose (%)	3									
164	Maltose (%)	2	1	0.1050							
165	Sucrose (%)	3	3	2.703	0.0690	2.703	0.0690	0.0398	2.55%	0.0553	3.44%
166	Raffinose (%)	3	3	0.4123	0.0366	0.4123	0.0366	0.0211	8.87%	0.0200	4.57%
167	Stachyose (%)	3	3	1.048	0.0569	1.048	0.0569	0.0328	5.43%	0.0177	3.97%
400	Water Activity (Units)	13	13	0.5062	0.0271	<b>0.5068</b>	0.0295	0.0102	5.81%	0.0039	
516	Arsenic, Total (ppm)	9	8	0.1682	0.0093	<b>0.1682</b>	0.0105	0.0047	6.27%	0.0082	20.92%
518	Cadmium (ppm)	11	10	0.1246	0.0166	<b>0.1246</b>	0.0189	0.0075	15.14%	0.0058	21.88%
520	Chromium (ppm)	13	13	3.495	0.8711	<b>3.418</b>	0.7901	0.2739	23.12%	0.0825	13.30%
526	Lead (ppm)	10	9	0.1281	0.0405	<b>0.1281</b>	0.0460	0.0192	35.89%	0.0072	21.79%
529	Mercury (ppb)	3	1								
539	Nickel (ppm)	8	8	2.063	0.3308	<b>2.063</b>	0.3751	0.1658	18.19%	0.0575	14.35%
702	Butyric Acid (4:0) (%)	1		0.0200							
704	Caproic Acid (6:0) (%)	1		0.0200							
706	Caprylic acid (8:0) (% (w/w))	1		0.0200							
708	Capric acid (10:0) (% (w/w))	1		0.0200							
710	Lauric Acid (12:0) (% (w/w))	3	1								
714	Myristic Acid (14:0) (% (w/w))	2	1	0.0200							
716	Palmitic Acid (16:0) (% (w/w))	3	3	0.5010	0.1520	0.5010	0.1520	0.0877	30.33%	0.0087	4.44%
718	Palmitoleic Acid (9c-16:1) (% (w/w))	3	2	0.0060	0.0007	0.0060	0.0007	0.0005	11.83%	0.0010	8.64%
720	Margaric acid (17:0) (% (w/w))	1		0.0200							
722	Stearic Acid (18:0) (% (w/w))	3	3	0.1100	0.0300	0.1100	0.0300	0.0173	27.27%	0.0007	5.58%
724	Oleic Acid (9c-18:1) (% (w/w))	3	3	0.6822	0.1678	0.6822	0.1678	0.0969	24.59%	0.0243	4.24%
726	Linoleic Acid (9c,12c-18:2) (% (w/w))	6	6	1.703	0.3530	<b>1.703</b>	0.4003	0.2043	23.51%	0.0528	3.69%
728	alpha-Linolenic Acid (9c,12c,15c-18:3) (% (w/w))	4	3	0.1863	0.0412	0.1863	0.0412	0.0238	22.13%	0.0000	5.15%
730	Arachidic Acid (20:0) (% (w/w))	3	3	0.0158	0.0080	0.0158	0.0080	0.0046	50.79%	0.0037	7.46%
732	Gondoic Acid (11c-20:1) (% (w/w))	2	1	0.0105							
736	Arachidonic Acid (5c,8c,11c,14c-20:4) (% (w/w))	2		0.0000							
740	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5) (% (w/w))	3									
742	Behenic Acid (22:0) (% (w/w))	3	3	0.0132	0.0059	0.0132	0.0059	0.0034	44.95%	0.0003	7.67%
744	Erucic Acid (13c-22:1) (% (w/w))	2		0.0050							
746	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5) (%)	3									
748	Lignoceric Acid (24:0) (% (w/w))	3	2	0.0088	0.0018	0.0088	0.0018	0.0013	20.23%	0.0005	8.16%
750	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6) (%)	3									
752	Nervonic Acid (24:1) isomers (% (w/w))	2		0.0050							
754	Total n-3 Polyunsaturated (Omega-3) Fatty Acids (% (w/w))	5	5	0.2132	0.0146	0.2132	0.0146	0.0065	6.86%	0.0036	5.05%
756	Total n-6 Polyunsaturated (Omega-6) Fatty Acids (% (w/w))	5	4	1.820	0.1770	1.820	0.1770	0.0885	9.72%	0.0100	3.66%
758	Total Saturated Fatty Acids (% (w/w))	2	2	0.6925	0.2935						

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762	Total Monounsaturated Fatty Acids (% (w/w))	1	1	0.5450							
764	Total cis Monounsaturated Fatty Acids (% (w/w))	1	1	0.9450							
766	Total Polyunsaturated Fatty Acids (% (w/w))	1	1	1.330							
768	Total cis Polyunsaturated Fatty Acids (% (w/w))	1	1	1.970							
770	Total Fat (equivalent to NLEA) (% (w/w))	1	1	4.005							
772	Total Fatty Acids (% (w/w))	2	2	3.428	0.5692						

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.