



**AAFCO**  
Association of American Feed Control Officials



**Pet Food Ingredient Scheme**

**Fish Meal**

**Test Material Code # 202344**

**Analyte Summary Report**

**# Labs Reporting: 85**

**# Analytes Reported: 97**

**Issue Date : 12/31/2023**

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 (Rob R-bar)	Thompson Horwitz %RSD
001	Loss on Drying (%)	56	55	8.128	7.823	7.125	0.2692	0.0454	3.78%	0.0882	2.98%
002	Protein, Crude (%)	82	81	63.27	0.8750	63.41	0.4796	0.0666	0.76%	0.3016	1.26%
003	Fat, Crude (%)	35	33	9.456	0.5834	9.481	0.3317	0.0722	3.50%	0.1230	2.85%
004	Fiber, Crude (%)	23	19	0.6703	0.5969	0.5926	0.4869	0.1396	82.17%	0.1884	4.33%
005	Ash (%)	68	66	20.78	0.3589	20.78	0.1916	0.0295	0.92%	0.0895	2.19%
008	Fiber, Acid Detergent (%)	11	10	2.306	1.160	2.196	1.039	0.4109	47.34%	0.1917	3.55%
009	Fiber, Neutral Detergent (%)	9	8	8.253	2.185	8.253	2.478	1.095	30.02%	0.4272	2.91%
010	Moisture (%)	3	3	6.832	0.4035	6.832	0.4035	0.2330	5.91%	0.1350	3.00%
011	Loss on Drying, HT (%)	19	19	7.851	0.4506	7.923	0.2804	0.0804	3.54%	0.0845	2.93%
012	Starch (%)	4	4	0.7153	0.7779	0.7153	0.7779	0.3890	108.76%	0.0461	4.21%
013	Fat, Pretreat (%)	42	42	9.836	1.350	9.975	0.9994	0.1928	10.02%	0.3735	2.83%
015	Aluminum (ppm)	5	5	1,109	202.0	1,109	202.0	90.36	18.22%	36.20	5.57%
017	Boron (ppm)	6	6	6.748	1.017	6.748	1.153	0.5886	17.09%	0.3956	12.00%
019	Calcium (%)	62	61	4.988	0.3103	4.993	0.3037	0.0486	6.08%	0.1157	3.14%
021	Cobalt (ppm)	7	7	1.827	0.3647	1.877	0.2908	0.1374	15.50%	0.0551	14.55%
022	Copper (ppm)	43	40	4.794	2.791	4.098	1.130	0.2232	27.56%	0.5556	12.94%
025	Iron (ppm)	33	32	925.8	78.61	932.3	68.71	15.18	7.37%	32.47	5.72%
027	Magnesium (%)	60	59	0.2460	0.0149	0.2462	0.0123	0.0020	5.00%	0.0091	4.94%
028	Manganese (ppm)	57	56	59.15	4.512	59.16	4.739	0.7916	8.01%	1.457	8.66%
031	Phosphorus (%)	60	59	3.115	0.2669	3.118	0.2922	0.0476	9.37%	0.0811	3.37%
032	Potassium (%)	60	59	1.231	0.0687	1.230	0.0675	0.0110	5.49%	0.0394	3.88%
033	Salt as chloride (%)	5	5	2.281	0.0907	2.281	0.0907	0.0406	3.98%	0.0394	3.53%
034	Selenium, Total (Se) (ppm)	5	4	2.595	0.3922	2.595	0.3922	0.1961	15.11%	0.1087	13.86%
035	Sodium (%)	58	57	0.9772	0.0554	0.9792	0.0530	0.0088	5.41%	0.0298	4.01%
036	Sulfur (%)	16	16	0.9702	0.0993	0.9761	0.0966	0.0302	9.89%	0.0293	4.01%
037	Zinc (ppm)	50	48	93.74	14.02	94.14	12.41	2.239	13.18%	4.710	8.07%
038	Molybdenum (ppm)	6	6	0.3728	0.0776	0.3728	0.0880	0.0449	23.61%	0.0510	18.56%
040	Barium (ppm)	1	1	11.58							
041	Vanadium (ppm)	1	1	4.152							

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042	Chloride (%)	1	1	1.415							
101	Choline Chloride (ppm)	2	2	2,365	260.9						
102	Niacin (ppm)	1	1	115.0							
104	Riboflavin (ppm)	2	2	1.181	0.1336						
105	Thiamine (ppm)	1		0.5000							
107	Vitamin B12 (ppb)	1	1	319.0							
109	Vitamin E (IU / kg)	1	1	8.000							
112	Pyridoxine (µg / g)	2	2	0.7230	0.9433						
120	Alanine (%)	11	11	3.508	1.041	3.823	0.2888	0.1088	7.55%	0.0827	3.27%
121	Arginine (%)	11	11	3.721	0.4344	3.700	0.3622	0.1365	9.79%	0.0470	3.28%
122	Aspartic (%)	11	10	5.069	0.8140	5.227	0.5538	0.2189	10.59%	0.0998	3.12%
124	Cysteine/Cystine (%)	11	11	0.5970	0.3347	0.4833	0.0782	0.0295	16.19%	0.0241	4.46%
125	Glutamic (%)	11	11	7.311	1.378	7.667	0.7195	0.2712	9.39%	0.1207	2.94%
126	Glycine (%)	11	10	4.640	0.4411	4.662	0.4497	0.1778	9.65%	0.0368	3.17%
127	Histidine (%)	11	10	1.640	0.9430	1.378	0.1498	0.0592	10.88%	0.0168	3.81%
128	Isoleucine (%)	10	9	2.236	0.3851	2.310	0.2331	0.0971	10.09%	0.0417	3.53%
129	Leucine (%)	11	10	3.768	0.9394	4.062	0.2996	0.1184	7.38%	0.0795	3.24%
130	L-Lysine (%)	11	11	4.200	0.8611	4.393	0.5319	0.2005	12.11%	0.0585	3.20%
131	Methionine (%)	11	10	1.664	0.4493	1.543	0.0938	0.0371	6.08%	0.0614	3.75%
132	Phenylalanine (%)	11	10	2.263	0.2609	2.252	0.1813	0.0717	8.05%	0.0211	3.54%
133	Proline (%)	11	11	2.923	0.5349	2.851	0.4106	0.1548	14.40%	0.0421	3.42%
134	Serine (%)	11	11	2.155	0.5456	2.274	0.2415	0.0910	10.62%	0.0674	3.53%
135	Threonine (%)	11	11	2.267	0.2984	2.273	0.3254	0.1227	14.32%	0.0561	3.53%
136	Tryptophan (%)	8	8	0.5266	0.1750	0.5478	0.1454	0.0642	26.54%	0.0202	4.38%
137	Tyrosine (%)	10	10	1.541	0.4604	1.620	0.3015	0.1192	18.61%	0.0636	3.72%
138	Valine (%)	10	10	2.610	0.4153	2.674	0.2964	0.1172	11.08%	0.0966	3.45%
139	Taurine (%)	3	3	0.5710	0.0560	0.5710	0.0560	0.0323	9.80%	0.0174	4.35%
357	Ethoxyquin (ppm)	1	1	700.5							
400	Water Activity (Units)	2	2	0.5151	0.0277						
516	Arsenic, Total (As) (ppm)	3	3	3.828	0.2222	3.828	0.2222	0.1283	5.81%	0.2779	13.07%
518	Cadmium (ppm)	5	4	0.1086	0.0033	0.1086	0.0033	0.0016	3.03%	0.0094	22.00%
520	Chromium, Total (Cr) (ppm)	5	5	4.494	0.7252	4.494	0.7252	0.3243	16.14%	0.3130	12.76%
526	Lead (ppm)	4	4	1.493	0.1267	1.493	0.1267	0.0633	8.48%	0.0877	15.06%
529	Mercury (ppb)	1	1	53.63							
539	Nickel (ppm)	4	4	2.106	0.4524	2.106	0.4524	0.2262	21.48%	0.0824	14.30%
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)	1		0.0200							

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714	Myristic Acid (14:0) (% (w/w))	2	2	0.6823	0.0880						
716	Palmitic Acid (16:0) (% (w/w))	2	2	1.915	0.0495						
718	Palmitoleic Acid (9c-16:1) (% (w/w))	2	2	0.8838	0.0477						
720	Margaric acid (17:0) (% (w/w))	2	2	0.0683	0.0025						
722	Stearic Acid (18:0) (% (w/w))	2	2	0.3588	0.0195						
724	Oleic Acid (9c-18:1) (% (w/w))	2	2	0.5335	0.1365						
726	Linoleic Acid (9c,12c-18:2) (% (w/w))	2	2	0.1230	0.0042						
728	alpha-Linolenic Acid (9c,12c,15c-18:3) (% (w/w))	2	2	0.1168	0.0025						
730	Arachidic Acid (20:0) (% (w/w))	1	1	0.0225							
732	Gondoic Acid (11c-20:1) (% (w/w))	2	2	0.0488	0.0088						
736	Arachidonic Acid (5c,8c,11c,14c-20:4) (% (w/w))	2	2	0.1648	0.0428						
738	Mead Acid (11c,14c,17c-20:3) (% (w/w))	1	1	0.0300							
740	Eicosapentaenoic Acid EPA (5c,8c,11c,14c,17c-20:5) (% (w/w))	2	2	0.7055	0.0785						
742	Behenic Acid (22:0) (% (w/w))	2	2	0.0203	0.0004						
744	Erucic Acid (13c-22:1) (% (w/w))	2		0.0000							
746	Docosapentaenoic Acid n-3 DPA (7c,10c,13c,16c,19c-22:5) (%)	2	2	0.1810	0.0269						
748	Lignoceric Acid (24:0) (% (w/w))	2	2	0.0235	0.0050						
750	Docosahexaenoic Acid DHA (4c,7c,10c,13c,16c,19c-22:6) (%)	2	2	0.8443	0.0838						
752	Nervonic Acid (24:1) isomers (% (w/w))	2	2	0.0313	0.0159						
754	Total n-3 Polyunsaturated (Omega-3) Fatty Acids (% (w/w))	2	2	2.094	0.2323						
756	Total n-6 Polyunsaturated (Omega-6) Fatty Acids (% (w/w))	2	2	0.3830	0.0396						
758	Total Saturated Fatty Acids (% (w/w))	2	2	3.182	0.1796						
762	Total Monounsaturated Fatty Acids (% (w/w))	1	1	1.605							
764	Total cis Monounsaturated Fatty Acids (% (w/w))	1	1	1.859							
766	Total Polyunsaturated Fatty Acids (% (w/w))	1	1	2.560							
768	Total cis Polyunsaturated Fatty Acids (% (w/w))	1	1	3.012							
770	Total Fat (equivalent to NLEA) (% (w/w))	1	1	8.696							
772	Total Fatty Acids (% (w/w))	3	3	7.028	4.380	7.028	4.380	2.529	62.33%	0.1400	2.98%

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.