AAFCO Proficiency Testing Program

ANAB ACCREDITED ISO/IEC 17043 PROFICIENCY TESTING PROVIDER

AAFCO PTP Pet Food Ingredient Scheme

Pet Food Ingredient Scheme

 # Labs Reporting: 57

Wheat Flour

Method Summary Report

 # Methods Reported: 193

Test Material Code # 202141

(Precision Report Follows)

Issue Date : 03/31/2021

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 (R-bar)	Thompson Horwitz %RSD
001.07	Loss on Drying, 104°C 3 hr, in malt (%)	19	**19**	9.368	0.3377	**9.408**	0.2677	0.0768	2.85%	0.1412	2.85%
001.99	Loss on Drying, Miscellaneous (%)	8	**8**	9.179	0.5456	**9.179**	0.6187	0.2734	6.74%	0.2150	2.87%
001.00	Loss on Drying, Vac 95°C 5 hr (%)	3	3	9.302	0.2790	9.302	0.2790	0.1611	3.00%	0.1467	2.86%
001.03	Loss on Drying, Low temp. methods (%)	1	1	9.660							
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	48	**47**	7.726	0.4402	**7.726**	0.4093	0.0746	5.30%	0.1255	2.94%
002.01	Protein, Crude, Auto Kjel-Foss (%)	3	3	8.034	0.2175	8.034	0.2175	0.1538	2.71%	0.0583	2.92%
002.08	Protein, Crude, Cu/Ti (%)	2	2	7.875	0.0212						
002.00	Protein, Crude, Crude (%)	1	1	8.855							
002.04	Protein, Crude, Copper Catalyst (%)	1	1	7.110							
002.05	Protein, Crude, Copper, Boric Acid (%)	1	1	7.890							
002.09	Protein, Crude, Selenium Catalyst (%)	1	1	7.355							
002.11	Protein, Crude, NIR (%)	1	1	8.120							
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	**10**	1.686	0.0952	**1.684**	0.1032	0.0408	6.13%	0.0534	3.70%
003.14	Fat, Crude, Ankom (%)	10	**10**	1.610	0.0975	**1.613**	0.1028	0.0406	6.37%	0.0661	3.72%
003.10	Fat, Crude, Randall, Pet Ether (%)	8	**8**	1.690	0.3005	**1.642**	0.2159	0.0954	13.15%	0.1808	3.71%
003.06	Fat, Crude, Pet Ether (%)	5	5	1.498	0.2167	1.498	0.2167	0.0969	14.47%	0.0200	3.76%
003.09	Fat, Crude, Randall, Diethyl Ether Ext (%)	2	2	1.768	0.0460						
003.13	Fat, Crude, Randall, Hexane Ext. (%)	2	2	1.748	0.1237						
003.01	Fat, Crude, Diethyl Ether Ext (13th ed.), Indirect (%)	1	1	1.255							
003.12	Fat, Crude, Hexane Ext (%)	1	1	1.610							
003.11	Fat, Crude, NIR (%)	1		0.0000							
004.07	Fiber, Crude, ANKOM (%)	16	**16**	2.280	0.4054	**2.314**	0.3274	0.1023	14.15%	0.1633	3.53%
004.00	Fiber, Crude, Asbestos Free (%)	8	**8**	2.275	0.2402	**2.297**	0.2036	0.0900	8.86%	0.1390	3.53%
004.06	Fiber, Crude, Fibertec (%)	3	3	2.607	0.3009	2.607	0.3009	0.1737	11.54%	0.1933	3.46%
004.03	Fiber, Crude, Fritted Glass (%)	2	2	2.530	0.2687						
005.00	Ash, 2h @ 600°C (%)	40	**39**	1.533	0.0599	**1.530**	0.0550	0.0110	3.59%	0.0414	3.75%
005.05	Ash, 3h @ 550°C (%)	6	**6**	1.520	0.0382	**1.520**	0.0433	0.0221	2.85%	0.0315	3.76%
005.99	Ash, Miscellaneous (%)	4	4	1.579	0.1222	1.579	0.1222	0.0611	7.74%	0.2175	3.73%
005.03	Ash, Microwave furnace (%)	1	1	1.535							

Test Material Code # 202141 (Precision Report Follows) **Issue Date : 03/31/2021**

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005.11	Ash, NIR (%)	1	1	3.695							
006.00	Total Sugars, As sucrose (%)	1	1	2.285							
008.08	Fiber, Acid Detergent, Filter Bag - ANKOM (%)	4	4	3.186	0.2082	3.186	0.2082	0.1041	6.54%	0.1957	3.36%
008.02	Fiber, Acid Detergent, Crucible (%)	2	2	2.548	0.3282						
009.09	Fiber, Neutral Detergent, Filter Bag - ANKOM (%)	3	3	10.02	0.0473	10.02	0.0473	0.0273	0.47%	0.2995	2.83%
009.04	Fiber, Neutral Detergent, Neutral Det-No ENZ Pretreat (%)	1	1	11.44							
009.07	Fiber, Neutral Detergent, AOAC -ENZ Pretreat (%)	1	1	10.36							
010.03	Moisture, Karl-Fischer (%)	1	1	9.455							
010.11	Moisture, NIR (%)	1	1	10.20							
010.99	Moisture, Miscellaneous (%)	1	1	9.325							
011.01	Loss on Drying, HT, 135°C 2hr (%)	18	**18**	9.629	0.6715	**9.766**	0.3538	0.1042	3.62%	0.1136	2.84%
011.02	Loss on Drying, HT, 130°C for 2 hours (%)	3	3	9.985	0.1297	9.985	0.1297	0.0749	1.30%	0.0233	2.83%
011.03	Loss on Drying, HT, 130°C, 1 hour, Flour (%)	1	1	9.420							
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	6	**6**	63.47	1.864	**63.47**	2.114	1.079	3.33%	1.212	1.26%
012.00	Starch, Polarimetric (Ewers) (%)	2	2	65.63	1.520						
012.03	Starch, Enzymatic-Colorimetric Method, Miscellaneous (%)	2	2	60.34	6.578						
012.04	Starch, Enzymatic-Enzyme Membrane Technology (YSI) (%)	1	1	63.35							
012.99	Starch, Miscellaneous (%)	1	1	62.80							
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	10	**9**	2.539	0.1541	**2.539**	0.1748	0.0728	6.88%	0.0662	3.48%
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	6	**6**	2.042	0.3371	**2.042**	0.3823	0.1951	18.72%	0.1193	3.59%
013.10	Fat, Acid Pretreat, Soxtec-Acid Hydrolysis (%)	2	2	2.238	0.0601						
015.41	Aluminum, ICP, Dry ash (ppm)	2	2	2.563	1.721						
015.43	Aluminum, ICP, Microwave (ppm)	1	1	0.9370							
015.53	Aluminum, ICP-MS, Microwave (ppm)	1	1	1.643							
017.43	Boron, ICP, Microwave (ppm)	2	2	1.187	0.2638						
017.41	Boron, ICP, Dry ash (ppm)	1	1	1.539							
017.53	Boron, ICP-MS, Microwave (ppm)	1	1	1.479							
019.43	Calcium, ICP, Microwave (%)	8	**8**	0.0324	0.0017	**0.0324**	0.0020	0.0009	6.10%	0.0023	6.70%
019.44	Calcium, ICP, Dry ash (%)	8	**8**	0.0364	0.0019	**0.0363**	0.0012	0.0005	3.33%	0.0013	6.59%
019.41	Calcium, ICP, Dry ash (%)	8	**7**	0.0343	0.0055	**0.0343**	0.0063	0.0030	18.32%	0.0003	6.64%
019.53	Calcium, ICP-MS, Microwave (%)	2	2	0.0297	0.0012						
019.42	Calcium, ICP, Open vessel (%)	1	1	0.0324							
021.41	Cobalt, ICP, Dry ash (ppm)	2	2	0.0652	0.0794						
021.43	Cobalt, ICP, Microwave (ppm)	2	2	0.0559	0.0367						
021.53	Cobalt, ICP-MS, Microwave (ppm)	1	1	0.0252							
021.31	Cobalt, AAS, Dry ash (ppm)	1		0.7500							
022.43	Copper, ICP, Microwave (ppm)	7	**6**	3.581	0.5469	**3.544**	0.5306	0.2708	14.97%	0.2659	13.22%
022.41	Copper, ICP, Dry ash (ppm)	5	4	3.416	0.1918	3.416	0.1918	0.0959	5.61%	0.1055	13.30%
022.53	Copper, ICP-MS, Microwave (ppm)	2	2	3.409	0.0980						
022.42	Copper, ICP, Open vessel (ppm)	1	1	3.932							

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025.43	Iron, ICP, Microwave (ppm)	6	**6**	32.55	9.745	**29.36**	2.525	1.289	8.60%	1.454	9.62%
025.41	Iron, ICP, Dry ash (ppm)	5	5	28.46	1.850	28.46	1.850	0.8273	6.50%	0.7237	9.66%
025.53	Iron, ICP-MS, Microwave (ppm)	2	2	27.46	1.433						
025.42	Iron, ICP, Open vessel (ppm)	1	1	28.84							
027.41	Magnesium, ICP, Dry ash (%)	9	**9**	0.1133	0.0079	**0.1121**	0.0059	0.0025	5.30%	0.0039	5.56%
027.43	Magnesium, ICP, Microwave (%)	8	**8**	0.1139	0.0072	**0.1139**	0.0081	0.0036	7.12%	0.0047	5.55%
027.44	Magnesium, ICP, Dry ash (%)	7	**7**	0.1088	0.0018	**0.1088**	0.0020	0.0010	1.85%	0.0021	5.59%
027.53	Magnesium, ICP-MS, Microwave (%)	2	2	0.1082	0.0003						
027.42	Magnesium, ICP, Open vessel (%)	1	1	0.1147							
028.43	Manganese, ICP, Microwave (ppm)	7	**6**	20.50	1.032	**20.50**	1.171	0.5975	5.71%	0.7885	10.15%
028.41	Manganese, ICP, Dry ash (ppm)	5	5	19.47	0.7608	19.47	0.7608	0.3402	3.91%	0.4435	10.23%
028.53	Manganese, ICP-MS, Microwave (ppm)	2	2	19.39	0.1942						
028.42	Manganese, ICP, Open vessel (ppm)	1	1	18.23							
031.41	Phosphorus, ICP, Dry ash (%)	9	**9**	0.3147	0.0175	**0.3128**	0.0150	0.0062	4.78%	0.0068	4.76%
031.43	Phosphorus, ICP, Microwave (%)	8	**8**	0.3209	0.0099	**0.3209**	0.0112	0.0050	3.50%	0.0122	4.75%
031.44	Phosphorus, ICP, Dry ash (%)	7	**7**	0.3146	0.0059	**0.3144**	0.0063	0.0030	2.00%	0.0080	4.76%
031.42	Phosphorus, ICP, Open vessel (%)	2	2	0.2964	0.0303						
031.53	Phosphorus, ICP-MS, Microwave (%)	2	2	0.3117	0.0132						
032.43	Potassium, ICP, Microwave (%)	13	**12**	0.4247	0.0182	**0.4246**	0.0172	0.0062	4.04%	0.0115	4.55%
032.41	Potassium, ICP, Dry ash (%)	11	**11**	0.4117	0.0255	**0.4111**	0.0218	0.0082	5.29%	0.0098	4.57%
032.44	Potassium, ICP, Dry ash (%)	8	**8**	0.3974	0.0319	**0.4068**	0.0081	0.0036	2.00%	0.0070	4.58%
032.31	Potassium, AAS, Dry ash (%)	3	3	0.4042	0.0188	0.4042	0.0188	0.0108	4.64%	0.0177	4.58%
032.42	Potassium, ICP, Open vessel (%)	3	3	0.4112	0.0021	0.4112	0.0021	0.0012	0.52%	0.0163	4.57%
032.53	Potassium, ICP-MS, Microwave (%)	2	2	0.3774	0.0189						
032.99	Potassium, Miscellaneous (%)	1	1	0.3805							
033.01	Salt as chloride, Poten Cl (%)	4	3	0.1052	0.0003	0.1052	0.0003	0.0002	0.28%	0.0070	5.61%
033.05	Salt as chloride, Ion Sel Electrode (%)	1	1	0.0900							
033.99	Salt, Miscellaneous (%)	1	1	0.0800							
033.00	Salt as chloride, Sol Cl (%)	1		0.1000							
034.53	Selenium, ICP-MS, Microwave (ppm)	2	2	0.0519	0.0104						
034.04	Selenium, AA, Hydride (ppm)	2	1	0.0390							
035.41	Sodium, ICP, Dry ash (%)	16	**15**	0.0116	0.0070	**0.0113**	0.0072	0.0023	63.83%	0.0007	7.86%
035.43	Sodium, ICP, Microwave (%)	6	3	0.0040	0.0052	0.0040	0.0052	0.0038	131.74%	0.0001	9.19%
035.53	Sodium, ICP-MS, Microwave (%)	2	2	0.0010	0.0001						
035.42	Sodium, ICP, Open vessel (%)	1	1	0.0033							
036.43	Sulfur, ICP, Microwave (%)	6	**6**	0.1009	0.0016	**0.1009**	0.0018	0.0009	1.75%	0.0035	5.65%
036.42	Sulfur, ICP, Open vessel (%)	4	4	0.0944	0.0040	0.0944	0.0040	0.0020	4.21%	0.0013	5.71%
037.43	Zinc, ICP, Microwave (ppm)	7	**7**	24.46	1.587	**24.46**	1.800	0.8504	7.36%	1.340	9.89%
037.41	Zinc, ICP, Dry ash (ppm)	5	5	24.48	2.162	24.48	2.162	0.9667	8.83%	0.6057	9.89%
037.53	Zinc, ICP-MS, Microwave (ppm)	2	2	23.54	1.504						

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037.42	Zinc, ICP, Open vessel (ppm)	1	1	17.60							
038.41	Molybdenum, ICP, Dry ash (ppm)	2	2	0.3903	0.2542						
038.43	Molybdenum, ICP, Microwave (ppm)	2	2	0.5867	0.0188						
038.53	Molybdenum, ICP-MS, Microwave (ppm)	2	2	0.5938	0.0420						
040.53	Barium, ICP-MS, Microwave (ppm)	1	1	2.852							
041.53	Vanadium, ICP-MS, Microwave (ppm)	1	1	0.0046							
102.01	Niacin, Microbiological (ppm)	1	1	35.60							
104.00	Riboflavin, Fluorometric (ppm)	1		1.000							
105.01	Thiamine, Fluorometer (ppm)	1	1	2.535							
112.01	Pyridoxine, LC (µg / g)	1	1	1.960							
113.01	Folic Acid, Micro (ppm)	1	1	0.4475							
120.00	Alanine, Post-col Ninhydrin Der (%)	4	4	0.3312	0.0103	0.3312	0.0103	0.0052	3.12%	0.0041	4.72%
120.05	Alanine, Pre-col AQC Der (%)	1	1	0.2900							
120.99	Alanine, Miscellaneous (%)	1	1	0.3250							
121.00	Arginine, Post-col Ninhydrin Der (%)	4	4	0.4149	0.0297	0.4149	0.0297	0.0148	7.15%	0.0184	4.57%
121.05	Arginine, Pre-col AQC Der (%)	1	1	0.4050							
121.99	Arginine, Miscellaneous (%)	1	1	0.4250							
122.00	Aspartic, Post-col Ninhydrin Der (%)	4	4	0.4549	0.0213	0.4549	0.0213	0.0107	4.69%	0.0170	4.50%
122.05	Aspartic, Pre-col AQC Der (%)	1	1	0.4050							
122.99	Aspartic, Miscellaneous (%)	1	1	0.4400							
124.00	Cysteine/Cystine, PAO Post-col Ninhydri (%)	4	3	0.2000	0.0265	0.2000	0.0265			0.0000	5.10%
124.05	Cysteine/Cystine, PAO Pre-col AQC Der (%)	1	1	0.2000							
124.99	Cysteine/Cystine, Miscellaneous (%)	1	1	0.1800							
125.00	Glutamic, Post-col Ninhydrin Der (%)	4	4	1.954	0.0682	1.954	0.0682	0.0341	3.49%	0.0533	3.62%
125.05	Glutamic, Pre-col AQC Der (%)	1	1	1.945							
125.99	Glutamic, Miscellaneous (%)	1	1	1.990							
126.00	Glycine, Post-col Ninhydrin Der (%)	4	4	0.3605	0.0082	0.3605	0.0082	0.0041	2.28%	0.0073	4.66%
126.05	Glycine, Pre-col AQC Der (%)	1	1	0.2850							
126.99	Glycine, Miscellaneous (%)	1	1	0.3500							
127.00	Histidine, Post-col Ninhydrin Der (%)	4	4	0.2063	0.0139	0.2063	0.0139	0.0069	6.71%	0.0111	5.07%
127.05	Histidine, Pre-col AQC Der (%)	1	1	0.1650							
127.99	Histidine, Miscellaneous (%)	1	1	0.1900							
128.00	Isoleucine, Post-col Ninhydrin Der (%)	4	3	0.2833	0.0058	0.2833	0.0058			0.0000	4.84%
128.05	Isoleucine, Pre-col AQC Der (%)	1	1	0.2500							
128.99	Isoleucine, Miscellaneous (%)	1	1	0.2600							
129.00	Leucine, Post-col Ninhydrin Der (%)	4	4	0.5385	0.0089	0.5385	0.0089	0.0045	1.66%	0.0157	4.39%
129.05	Leucine, Pre-col AQC Der (%)	1	1	0.5050							
129.99	Leucine, Miscellaneous (%)	1	1	0.5200							
130.00	L-Lysine, Post-col Ninhydrin Der (%)	4	3	0.2902	0.0197	0.2902	0.0197	0.0140	6.80%	0.0002	4.82%
130.05	L-Lysine, Pre-col AQC Der (%)	1	1	0.2800							

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130.99	L-Lysine, Miscellaneous (%)	1	1	0.2900							
131.00	Methionine, PAO Post-col Ninhydrin Der (%)	4	4	0.1348	0.0125	0.1348	0.0125	0.0062	9.24%	0.0075	5.41%
131.05	Methionine, PAO Pre-col AQC Der (%)	1	1	0.1650							
131.99	Methionine, Miscellaneous (%)	1	1	0.1200							
132.00	Phenylalanine, Post-col Ninhydrin Der (%)	4	3	0.3448	0.0221	0.3448	0.0221	0.0156	6.40%	0.0037	4.69%
132.05	Phenylalanine, Pre-col AQC Der (%)	1	1	0.3700							
132.99	Phenylalanine, Miscellaneous (%)	1	1	0.3100							
133.00	Proline, Post-col Ninhydrin Der (%)	4	4	0.6440	0.0344	0.6440	0.0344	0.0172	5.33%	0.0143	4.27%
133.05	Proline, Pre-col AQC Der (%)	1	1	0.6700							
133.99	Proline, Miscellaneous (%)	1	1	0.6800							
134.00	Serine, Post-col Ninhydrin Der (%)	4	4	0.3706	0.0393	0.3706	0.0393	0.0197	10.62%	0.0123	4.64%
134.05	Serine, Pre-col AQC Der (%)	1	1	0.3550							
134.99	Serine, Miscellaneous (%)	1	1	0.3400							
135.00	Threonine, Post-col Ninhydrin Der (%)	4	4	0.2522	0.0132	0.2522	0.0132	0.0066	5.22%	0.0087	4.92%
135.05	Threonine, Pre-col AQC Der (%)	1	1	0.2350							
135.99	Threonine, Miscellaneous (%)	1	1	0.2400							
136.00	Tryptophan, Alka-Hydrol Post-col Ninhyd (%)	2	2	0.1316	0.0306						
136.01	Tryptophan, Alka-Hydrol Rev Phase LC UV (%)	1	1	0.0957							
136.99	Tryptophan, Miscellaneous (%)	1	1	0.0950							
137.00	Tyrosine, Post-col Ninhydrin Der (%)	4	3	0.1739	0.0259	0.1739	0.0259	0.0149	14.88%	0.0163	5.20%
137.05	Tyrosine, Pre-col AQC Der (%)	1	1	0.2600							
137.99	Tyrosine, Miscellaneous (%)	1	1	0.1750							
138.00	Valine, Post-col Ninhydrin Der (%)	4	4	0.3752	0.0165	0.3752	0.0165	0.0083	4.41%	0.0116	4.64%
138.05	Valine, Pre-col AQC Der (%)	1	1	0.3750							
138.99	Valine, Miscellaneous (%)	1	1	0.3300							
139.00	Taurine, Post-col Ninhydrin Der (%)	1	1	0.1400							
139.99	Taurine, Miscellaneous (%)	1	1	0.1400							
400.01	Water Activity, Aqualab chilled mirror (Units)	1	1	0.3185							
516.00	Arsenic, Total, AA, Hydride (ppm)	1	1	0.0030							
516.43	Arsenic, Total, ICP, Microwave (ppm)	1	1	0.0042							
516.53	Arsenic, Total, ICP-MS, Microwave (ppm)	2	1	0.0030							
518.53	Cadmium, ICP-MS, Microwave (ppm)	3	3	0.0252	0.0020	0.0252	0.0020	0.0012	7.95%	0.0019	22.00%
518.41	Cadmium, ICP, Dry ash (ppm)	2	2	0.0232	0.0032						
518.43	Cadmium, ICP, Microwave (ppm)	2	1	0.0149							
520.41	Chromium, ICP, Dry ash (ppm)	2	2	0.0974	0.0197						
520.43	Chromium, ICP, Microwave (ppm)	2	2	0.1090	0.0155						
520.53	Chromium, ICP-MS, Microwave (ppm)	2	2	0.0564	0.0047						
526.41	Lead, ICP, Dry ash (ppm)	2	2	0.0171	0.0056						
526.43	Lead, ICP, Microwave (ppm)	1	1	0.2540							
526.53	Lead, ICP-MS, Microwave (ppm)	2	1	0.0068							

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529.99	Mercury, Miscellaneous (ppb)	1	1	0.8507							
539.41	Nickel, ICP, Dry ash (ppm)	2	2	0.0837	0.0413						
539.43	Nickel, ICP, Microwave (ppm)	1	1	0.1266							
539.53	Nickel, ICP-MS, Microwave (ppm)	1	1	0.1411							

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 Proficiency Testing Program

ANAB ACCREDITED ISO/IEC 17043 PROFICIENCY TESTING PROVIDER

AAFCO PTP Pet Food Ingredient Scheme

Pet Food Ingredient Scheme

Wheat Flour

Test Material Code # 202141

Method Precision Report

 # Methods Reported: 36

 # Labs Reporting: 57

Issue Date : 03/31/2021

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 (%)	19	18	9.368	0.3377	0.2431	0.1561	0.2889	2.58%	1.66%	3.07%	1.851
001.99	Loss on Drying, Miscellaneous (%)	8	8	9.179	0.5456	0.5256	0.2072	0.5649	5.73%	2.26%	6.15%	2.727
002.06	Protein, Crude, Combustion Nitrogen Analyzer (%)	48	43	7.726	0.4402	0.3520	0.1001	0.3659	4.55%	1.29%	4.73%	3.656
003.00	Fat, Crude, Diethyl Ether Ext., Direct (%)	10	10	1.686	0.0952	0.0903	0.0424	0.0998	5.36%	2.52%	5.92%	2.352
003.06	Fat, Crude, Pet Ether (%)	5	5	1.498	0.2167	0.2164	0.0161	0.2170	14.45%	1.08%	14.49%	13.46
003.10	Fat, Crude, Randall, Pet Ether (%)	8	7	1.690	0.3005	0.0304	0.2068	0.2090	1.91%	12.96%	13.10%	1.011
003.14	Fat, Crude, Ankom (%)	10	10	1.610	0.0975	0.0859	0.0652	0.1078	5.34%	4.05%	6.70%	1.655
004.00	Fiber, Crude, Asbestos Free (%)	8	8	2.275	0.2402	0.2247	0.1200	0.2548	9.88%	5.28%	11.20%	2.123
004.07	Fiber, Crude, ANKOM (%)	16	14	2.280	0.4054	0.3169	0.1366	0.3451	13.45%	5.80%	14.64%	2.526
005.00	Ash, 2h @ 600°C (%)	40	37	1.533	0.0599	0.0515	0.0344	0.0619	3.37%	2.25%	4.05%	1.801
005.05	Ash, 3h @ 550°C (%)	6	6	1.520	0.0382	0.0340	0.0246	0.0420	2.24%	1.62%	2.76%	1.705
011.01	Loss on Drying, HT, 135°C 2hr (%)	18	17	9.629	0.6715	0.3791	0.1141	0.3959	3.88%	1.17%	4.06%	3.471
012.01	Starch, Enzymatic-Colorimetric Method (Megazyme) (%)	6	6	63.47	1.864	1.729	0.9861	1.990	2.72%	1.55%	3.14%	2.018
013.00	Fat, Acid Pretreat, Acid hydrolysis (%)	6	6	2.042	0.3371	0.3261	0.1205	0.3477	15.97%	5.90%	17.03%	2.884
013.02	Fat, Acid Pretreat, Mojonnier, Bak Ext (%)	10	9	2.539	0.1541	0.1493	0.0539	0.1588	5.88%	2.12%	6.25%	2.945
019.41	Calcium, ICP, Dry ash (%)	8	7	0.0343	0.0055	0.0055	0.0003	0.0055	16.14%	0.96%	16.17%	16.78
019.43	Calcium, ICP, Microwave (%)	8	7	0.0324	0.0017	0.0011	0.0014	0.0018	3.51%	4.41%	5.64%	1.278
019.44	Calcium, ICP, Dry ash (%)	8	8	0.0364	0.0019	0.0017	0.0011	0.0020	4.59%	3.07%	5.52%	1.797
022.43	Copper, ICP, Microwave (ppm)	7	6	3.581	0.5469	0.5140	0.2644	0.5780	14.35%	7.38%	16.14%	2.186
025.41	Iron, ICP, Dry ash (ppm)	5	5	28.46	1.850	1.779	0.7179	1.918	6.25%	2.52%	6.74%	2.672
025.43	Iron, ICP, Microwave (ppm)	6	5	32.55	9.745	1.261	0.7802	1.483	4.41%	2.73%	5.18%	1.901
027.41	Magnesium, ICP, Dry ash (%)	9	8	0.1133	0.0079	0.0035	0.0035	0.0050	3.18%	3.17%	4.49%	1.417
027.43	Magnesium, ICP, Microwave (%)	8	7	0.1139	0.0072	0.0054	0.0030	0.0062	4.84%	2.66%	5.52%	2.077
027.44	Magnesium, ICP, Dry ash (%)	7	7	0.1088	0.0018	0.0011	0.0019	0.0022	1.03%	1.79%	2.07%	1.155
028.41	Manganese, ICP, Dry ash (ppm)	5	5	19.47	0.7608	0.6894	0.4548	0.8260	3.54%	2.34%	4.24%	1.816
028.43	Manganese, ICP, Microwave (ppm)	7	6	20.50	1.032	0.8909	0.7379	1.157	4.35%	3.60%	5.64%	1.568
031.41	Phosphorus, ICP, Dry ash (%)	9	7	0.3147	0.0175	0.0102	0.0034	0.0108	3.28%	1.10%	3.46%	3.154
031.43	Phosphorus, ICP, Microwave (%)	8	7	0.3209	0.0099	0.0078	0.0062	0.0100	2.42%	1.93%	3.10%	1.605
031.44	Phosphorus, ICP, Dry ash (%)	7	7	0.3146	0.0059	0.0020	0.0078	0.0081	0.64%	2.49%	2.57%	1.033
032.41	Potassium, ICP, Dry ash (%)	11	11	0.4117	0.0255	0.0247	0.0090	0.0262	5.99%	2.18%	6.37%	2.924
032.43	Potassium, ICP, Microwave (%)	13	11	0.4247	0.0182	0.0180	0.0090	0.0201	4.23%	2.12%	4.73%	2.236
032.44	Potassium, ICP, Dry ash (%)	8	7	0.3974	0.0319	0.0041	0.0055	0.0068	1.00%	1.34%	1.67%	1.245
035.41	Sodium, ICP, Dry ash (%)	16	15	0.0116	0.0070	0.0070	0.0008	0.0071	60.46%	6.61%	60.82%	9.206
036.43	Sulfur, ICP, Microwave (%)	6	5	0.1009	0.0016	0.0012	0.0016	0.0020	1.17%	1.55%	1.94%	1.250
037.41	Zinc, ICP, Dry ash (ppm)	5	5	24.48	2.162	2.135	0.4807	2.188	8.72%	1.96%	8.94%	4.553
037.43	Zinc, ICP, Microwave (ppm)	7	7	24.46	1.587	1.247	1.390	1.867	5.10%	5.68%	7.63%	1.343

Test Material Code # 202141 **Issue Date : 03/31/2021**

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

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