Sub #	Moisture Z-Values	Protein Z-Values	Ash Z-Values	Falling Number Z-Values
19	1.53	0.95	0.58	0.20
38	1.21			
50	1.82	0.30	0.93	2.01
54	0.10	0.47	0.24	1.72
55	1.24	0.03	0.87	0.59
56	0.14	0.33	0.52	0.77
58	0.35	0.54	0.28	0.12
93	0.29	0.26	0.24	0.10
137	0.97	0.69	0.17	0.30
139	0.35	0.51	0.70	1.11
164	0.64	0.26	1.74	0.91
247	0.34	0.40	2.82	0.81
308	0.55	1.24	1.27	1.03
392	0.25	0.22	1.61	0.87
537	0.52			
592	0.25	0.95	0.06	0.51
593	0.25	0.36	1.27	
623	2.10	1.24	0.74	0.28
657	0.75	0.07	0.70	0.34
660	1.32	0.08	0.17	1.68
687	1.12	0.51	0.23	1.01
765	0.05	2.41	1.03	0.63
769	0.07	0.15	0.18	0.87
771	0.05	0.14	0.40	
775	1.26	0.37	1.39	0.36
902	2.24	0.00	0.28	1.38
1052	1.14	2.77	0.12	1.50
1326	0.55	0.07	0.52	0.36
1332	1.42	0.11	0.01	0.32
1352	0.55	1.21	0.69	0.65
1354	1.14	* 14.81	0.05	0.24
1427	0.25	0.26	0.52	0.87
1456	1.05	0.22	0.18	1.50
1460	0.81	1.89	0.87	0.99
1472	0.82	0.22	2.19	1.62
1493	1.24	0.22	1.03	1.15
1529	0.94	0.87	0.70	1.32
1531	0.43	2.45	0.70	
1534	1.35	2.23	* 5.02	
1585	0.25	0.03	1.27	1.42

Sub #	Moisture Z-Values	Protein Z-Values	Ash Z-Values	Falling Number Z-Values
1642	0.64	1.31	0.86	0.75
1662	2.25	0.24	0.06	0.12
1691	0.26	0.40	* 14.30	
1694	0.64		1.61	0.79
1711	0.29	0.59	1.49	
N	45	41	41	37
Mean	0.79	0.67	0.76	0.84
Min	0.05	0.00	0.01	0.10
Max	2.25	2.77	2.82	2.01

* Not included in analytical mean

Z-Values

Each individual z-value represents the decimal number of standard deviations by which an analytical result differs from the "true value", as represented by the mean. The minimum or "perfect" z-value is thus 0.00.

Proficiency in any one analysis over a year's time (11 or 12 monthly, 6 bimonthly, or 4 quarterly results) is determined by their mean z-value plus a penalty for each outlier (*) reported, if any. Proficiency in a series is determined by the mean of the mean z-values (including penalties, if any) for the specified principal analyses in that series.

In general, z-values of less than 2.00, consistently maintained and thus averaging less than 2000 over a year for a series (including outlier penalties, if any), are considered to represent satisfactory accuracy and precision. On the same basis, values of less than 1.00 consistently maintained represent outstanding accuracy and precision.

A detailed description of this rating system is available upon request from AACC headquarters.