

| <i>Subscriber<br/>Number</i> | <i>Moisture<br/>Z-Values</i> | <i>Protein<br/>Z-Values</i> | <i>Ash<br/>Z-Values</i> | <i>pH<br/>Z-Values</i> | <i>Falling Number<br/>Z-Values</i> |
|------------------------------|------------------------------|-----------------------------|-------------------------|------------------------|------------------------------------|
| 23                           | 0.75                         | 2.04                        | 0.70                    | 0.44                   | 0.40                               |
| 62                           | 0.31                         | 1.51                        | 0.30                    |                        |                                    |
| 116                          | 0.24                         | 0.20                        |                         |                        | 0.84                               |
| 164                          | 0.17                         | 0.33                        | 1.74                    | 0.05                   | 0.97                               |
| 191                          | 0.27                         | 0.04                        | 0.50                    | 1.10                   |                                    |
| 193                          | * 7.68                       | 0.41                        | 0.74                    | 0.92                   | 0.70                               |
| 242                          | 0.31                         | 0.71                        | 0.10                    |                        | 0.08                               |
| 247                          | 0.50                         | 1.08                        | 2.43                    | 1.84                   | 0.89                               |
| 274                          | 0.53                         | 1.08                        | 1.14                    | 0.62                   | 0.01                               |
| 325                          | 1.15                         | 0.84                        |                         | 2.04                   |                                    |
| 378                          | 0.16                         | 1.02                        | 0.10                    | 1.28                   |                                    |
| 388                          | 0.97                         | 0.27                        | 0.70                    | 0.61                   | 1.72                               |
| 484                          | 0.13                         | 0.04                        | 0.26                    | 0.50                   | 1.98                               |
| 512                          | 0.31                         | 2.53                        | 1.03                    | 0.68                   | 1.57                               |
| 519                          | 0.13                         | 0.96                        | 2.03                    |                        | 1.51                               |
| 603                          | 0.97                         | 0.16                        | 0.55                    | 0.07                   | 0.32                               |
| 607                          | 0.35                         | 0.35                        | 0.75                    | 0.62                   | 0.74                               |
| 641                          | 1.52                         | 2.49                        | 0.42                    | 2.04                   | 1.34                               |
| 649                          | 0.49                         | 0.41                        | 0.62                    | 1.05                   | 1.03                               |
| 653                          | 1.41                         | 0.76                        | 0.06                    | 1.28                   |                                    |
| 654                          | 0.68                         | 0.35                        | 0.06                    | 0.13                   |                                    |
| 655                          | 0.31                         | 0.27                        | 0.22                    | 1.54                   |                                    |
| 662                          | 0.90                         | 0.22                        | 0.59                    | 0.81                   | 0.74                               |
| 750                          | 2.62                         | 1.57                        | 1.91                    | 0.61                   |                                    |
| 769                          | 0.60                         | 0.84                        | 0.18                    | 0.05                   | 0.39                               |
| 771                          | 0.31                         | 0.39                        | 0.67                    | 1.53                   |                                    |
| 812                          | 0.31                         | 0.27                        | 0.70                    | 0.85                   | 0.91                               |
| 1020                         | 0.79                         | 0.08                        | 1.10                    | 1.22                   |                                    |
| 1056                         | 1.05                         | 0.22                        | 0.30                    | 0.61                   | 1.38                               |
| 1308                         | 0.20                         | 0.69                        | 0.14                    |                        | 0.22                               |
| 1326                         | 2.25                         | 0.02                        | 0.18                    | 0.62                   | 0.15                               |
| 1338                         | 0.31                         |                             | 0.71                    | 1.24                   |                                    |
| 1352                         | 0.09                         | 0.57                        | 1.11                    | 0.13                   | 0.01                               |
| 1369                         | 0.35                         | 0.33                        | 0.30                    | 0.67                   | 0.16                               |
| 1395                         | 0.49                         | 1.74                        |                         | 0.98                   | 0.57                               |
| 1427                         | 0.31                         | 0.27                        | 0.38                    | 0.31                   | 0.84                               |
| 1451                         | 0.05                         |                             |                         |                        |                                    |
| 1577                         | 2.88                         | 0.96                        | 2.71                    | 0.30                   |                                    |
| 1591                         | 0.31                         | 1.06                        | 0.42                    | 3.69                   | 0.96                               |
| 1601                         | 1.63                         | 0.10                        | 0.66                    | 0.48                   | 0.39                               |
| 1641                         | 0.68                         | 0.88                        | 0.50                    | 0.30                   | 1.82                               |
| 1684                         | 1.67                         | 1.25                        | 1.10                    | 1.60                   | 0.93                               |
| 1711                         | 1.01                         | 1.43                        | 1.23                    | 0.25                   |                                    |

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|------------------------------|------------------------------|-----------------------------|-------------------------|------------------------|------------------------------------|
| <b>N</b>                     | 42                           | 41                          | 39                      | 36                     | 29                                 |
| <b>Mean</b>                  | 0.73                         | 0.75                        | 0.75                    | 0.82                   | 0.81                               |
| <b>Min</b>                   | 0.05                         | 0.02                        | 0.06                    | 0.05                   | 0.01                               |
| <b>Max</b>                   | 2.88                         | 2.53                        | 2.71                    | 2.04                   | 1.98                               |

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\* 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 (6 bimonthly 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), 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 is available upon request from AACC headquarters.

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