

| <i>Subscriber Number</i> | <i>Moisture Z-Values</i> | <i>Protein Z-Values</i> | <i>Ash Z-Values</i> | <i>pH Z-Values</i> | <i>Falling Number Z-Values</i> |
|--------------------------|--------------------------|-------------------------|---------------------|--------------------|--------------------------------|
| 23                       | 0.23                     | 0.31                    | 0.08                | 0.50               | 1.90                           |
| 35                       | * 8.43                   | 0.74                    | * 4.27              | * 0.08             |                                |
| 164                      | 0.70                     | 0.45                    | 0.47                | 0.09               | 1.20                           |
| 191                      | 0.77                     | 0.36                    | 0.37                | 1.41               |                                |
| 247                      | 0.34                     | 0.92                    | 0.80                | 5.03               | 1.68                           |
| 274                      | 0.04                     | 1.21                    | 0.34                | 2.15               |                                |
| 325                      | 2.83                     | 0.97                    |                     | 0.50               |                                |
| 378                      | 0.53                     | 0.93                    | 0.76                | 0.16               |                                |
| 497                      | 0.23                     |                         |                     |                    | 0.57                           |
| 512                      | 1.29                     | 0.60                    | 0.34                | 0.49               | 0.45                           |
| 519                      | 0.47                     | 0.83                    | 0.89                | 0.33               | 1.32                           |
| 593                      | 0.91                     | 0.45                    | 0.73                |                    |                                |
| 603                      | 0.11                     | 0.35                    | 0.02                | 0.83               | 0.76                           |
| 641                      | 0.37                     | 1.35                    | 1.73                | 0.49               | 1.22                           |
| 649                      | 0.67                     | 1.12                    | 1.09                | 0.25               | 0.05                           |
| 653                      | 0.80                     | 0.31                    | 0.47                | 0.16               |                                |
| 654                      | 0.33                     | 0.12                    | 0.86                | 0.75               |                                |
| 655                      | 0.60                     | 0.83                    | 0.60                | 0.17               |                                |
| 662                      | 0.98                     | 1.88                    | 1.02                | 0.25               | 0.82                           |
| 750                      | 1.15                     | 0.21                    | 0.21                | 0.75               | 0.05                           |
| 812                      | 0.37                     | 0.50                    | 0.05                | 1.41               |                                |
| 1020                     | * 5.77                   | 0.35                    | 0.93                | 0.41               | 0.45                           |
| 1056                     | 1.96                     | 0.22                    | 0.08                | 1.32               | 2.43                           |
| 1326                     | 1.21                     | 0.78                    | 0.11                | 1.24               | 0.22                           |
| 1427                     | 0.03                     | 0.74                    | 0.89                | 1.65               | 0.18                           |
| 1451                     | 1.04                     |                         |                     |                    |                                |
| 1577                     | 0.64                     | 0.45                    | 0.08                | 0.66               |                                |
| 1598                     | 2.43                     | 0.35                    |                     | 0.00               |                                |
| 1601                     | 0.70                     | 0.07                    | 1.38                | 1.24               | 0.51                           |
| 1641                     | 0.41                     | 0.22                    | 0.50                | 10.56              | 0.05                           |
| 1663                     | 0.03                     | 0.31                    | 0.11                | 0.58               | 0.07                           |
| 1684                     | 1.86                     | 0.26                    | 2.03                | 0.83               | 0.40                           |
| 1692                     | 0.03                     | 2.87                    | 1.22                |                    | 0.93                           |
| 1722                     | 0.48                     | 2.77                    | 0.57                | 1.65               |                                |
| 1726                     | 0.13                     | 0.73                    | 1.71                | 1.24               | 0.11                           |
| 1742                     | 0.20                     | 1.26                    | 2.77                | 0.83               |                                |
| 1750                     | 0.31                     | 0.40                    | 0.93                | 1.98               | 0.80                           |
| 1759                     | 1.18                     | 0.88                    | * 3.78              | * 1.15             |                                |

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|--------------------------|--------------------------|-------------------------|---------------------|--------------------|--------------------------------|
| <b>N</b>                 | 36                       | 36                      | 32                  | 32                 | 22                             |
| <b>Mean</b>              | 0.73                     | 0.75                    | 0.76                | 0.80               | 0.73                           |
| <b>Min</b>               | 0.03                     | 0.07                    | 0.02                | 0.00               | 0.05                           |
| <b>Max</b>               | 2.83                     | 2.87                    | 2.77                | 2.15               | 2.43                           |

\* 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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