

| <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 | 0.21 | 2.10 | 0.10 | 0.26 | 0.54 |
| 35 | 0.82 | 2.14 | 2.60 | 2.12 | |
| 62 | 0.18 | 0.01 | 0.56 | | 0.51 |
| 164 | 0.05 | 0.40 | 0.75 | 0.32 | 0.81 |
| 191 | 0.07 | 0.26 | 0.75 | 0.95 | |
| 193 | 0.14 | 0.68 | 0.32 | 0.32 | 0.73 |
| 274 | 0.35 | 1.61 | 0.33 | 0.96 | 1.62 |
| 325 | 0.10 | 0.63 | | 0.49 | |
| 378 | 0.21 | 0.76 | 0.22 | 0.95 | |
| 387 | 0.78 | 0.01 | 1.29 | 0.21 | |
| 388 | 0.75 | 0.25 | 0.96 | 0.55 | 0.44 |
| 484 | 3.42 | 0.71 | 0.56 | 0.84 | 0.23 |
| 512 | 2.20 | 2.80 | 0.67 | 0.08 | 0.94 |
| 519 | * 3.70 | 0.72 | 0.35 | 0.49 | 0.88 |
| 589 | 0.68 | 0.14 | 1.00 | 0.15 | 1.15 |
| 593 | 0.86 | 0.53 | 2.58 | | |
| 603 | 0.65 | 1.18 | 0.80 | 0.21 | 0.60 |
| 607 | 0.75 | 0.14 | 0.78 | 0.03 | 0.04 |
| 641 | 0.65 | 1.02 | 1.35 | 1.42 | 0.69 |
| 649 | 0.24 | 0.49 | 0.33 | 2.00 | 1.28 |
| 653 | 0.64 | 0.02 | 0.23 | 2.23 | |
| 654 | 0.00 | 0.41 | 0.09 | 2.17 | |
| 662 | 0.40 | 1.18 | 0.07 | 0.32 | 0.35 |
| 750 | 0.18 | 0.37 | 0.33 | 0.61 | |
| 769 | 0.40 | 0.18 | 0.56 | 0.49 | 0.97 |
| 771 | 0.28 | 0.59 | 0.80 | 1.24 | |
| 1020 | 0.12 | 0.41 | 0.98 | 0.26 | 0.20 |
| 1056 | 0.54 | | 0.66 | 0.49 | 1.15 |
| 1308 | 0.14 | 0.17 | 0.41 | | 0.05 |
| 1326 | 0.40 | 0.37 | 0.10 | 1.19 | 0.05 |
| 1338 | 2.53 | | * 4.20 | * 1.25 | |
| 1369 | 0.19 | 0.29 | 0.49 | 0.55 | 0.05 |
| 1427 | 0.52 | 0.17 | 0.07 | 0.49 | 0.50 |
| 1577 | * 4.74 | 1.34 | 1.95 | 0.67 | |
| 1598 | 2.18 | 0.10 | 1.30 | 1.07 | |
| 1601 | 0.75 | 0.02 | 0.01 | 0.49 | 0.23 |
| 1641 | 0.52 | 0.09 | 0.25 | 0.32 | 2.32 |
| 1661 | 0.47 | 0.72 | 0.96 | 0.38 | |
| 1678 | 0.19 | 1.07 | 0.66 | 1.13 | 1.77 |
| 1684 | 0.35 | 1.46 | 0.66 | 0.43 | 0.63 |
| 1692 | 0.28 | 1.56 | 0.38 | 1.25 | 2.07 |
| 1711 | 1.89 | 1.79 | 2.39 | 1.42 | |

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|--------------------------|--------------------------|-------------------------|---------------------|--------------------|--------------------------------|
| N | 40 | 40 | 40 | 39 | 27 |
| Mean | 0.65 | 0.72 | 0.74 | 0.79 | 0.77 |
| Min | 0.00 | 0.01 | 0.01 | 0.03 | 0.04 |
| Max | 3.42 | 2.80 | 2.60 | 2.23 | 2.32 |

* 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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