

HPW-7

**American Society of Brewing Chemists  
HOPS CHECK SERVICE**

7/31/2012

| Subscriber<br>Number | Spectrophotometric Methods |                   |                      | Conductometric Methods |                |                  | HPLC Method        |                   |                            |                            | Standard |
|----------------------|----------------------------|-------------------|----------------------|------------------------|----------------|------------------|--------------------|-------------------|----------------------------|----------------------------|----------|
|                      | Alpha<br>Acids (%)         | Beta Acids<br>(%) | Hop Storage<br>Index | ASBC C.V.<br>(%)       | EBC LCV<br>(%) | MEBAK<br>LCV (%) | Alpha<br>Acids (%) | Beta Acids<br>(%) | Cohumulone<br>(% of total) | Colupulone<br>(% of total) |          |
| B 5                  | 13.38                      | 4.58              | 0.319                |                        | 12.78          | 13.16            | 11.90              | 4.30              | 28.29                      | 53.090                     |          |
| B 6                  | 13.42                      | 4.52              | 0.294                |                        |                |                  | 12.52              | 4.44              | 28.54                      | 54.060                     | ice3     |
| B 8                  | 13.86                      | 4.64              | 0.305                |                        | 12.36          | 13.89            | 12.47              | 4.43              | 28.64                      | 53.910                     | ice3     |
| B 10                 | 13.48                      | 5.07              | 0.290                |                        |                | 13.30            | 12.13              | 4.27              | 28.17                      | 53.200                     | ice3     |
| B 15                 | 13.80                      | 4.10              | * 0.210              |                        |                |                  |                    |                   |                            |                            |          |
| B 18                 |                            |                   |                      |                        |                |                  | 12.25              | 4.32              | 28.45                      | 54.490                     | ICE-3    |
| B 95                 | 13.26                      | 5.02              | 0.336                |                        |                |                  | 11.65              | 4.36              | 28.12                      | 52.400                     | ice2     |
| B 99                 | 13.62                      | 4.75              | 0.295                |                        | 12.45          | 12.64            |                    |                   |                            |                            |          |
| B 115                | 13.61                      | 4.38              | 0.317                |                        |                | 13.30            | 12.15              | 4.27              | 28.40                      | 54.600                     | ice3     |
| B 127                | 13.36                      | 4.53              | 0.305                |                        |                |                  |                    |                   |                            |                            | ice3     |
| B 140                | 14.12                      | 4.31              | 0.300                |                        | * 13.86        |                  | * 13.82            | * 5.10            | 28.50                      | 53.800                     | ice3     |
| B 142                | 12.46                      | 3.89              | 0.336                |                        |                |                  | 12.24              | 4.42              | * 30.53                    | 52.640                     |          |
| B 159                | 13.34                      | 4.94              | 0.328                |                        |                |                  |                    |                   |                            |                            |          |
| B 164                |                            |                   |                      |                        | 12.56          |                  |                    |                   |                            |                            |          |
| B 169                | 12.76                      | 5.05              | 0.340                |                        |                |                  | 11.34              | * 4.03            | 28.40                      | 52.300                     | ice3     |
| B 174                | 13.60                      | 4.80              |                      |                        |                |                  |                    |                   |                            |                            |          |
| B 176                | 12.46                      | * 1.93            | 0.356                |                        |                |                  |                    |                   |                            |                            |          |
| B 177                | 13.49                      | 4.70              |                      |                        |                |                  |                    |                   |                            |                            |          |
| N                    | 16                         | 15                | 13                   |                        | 4              | 5                | 9                  | 8                 | 9                          | 10                         |          |
| Mean                 | 13.38                      | 4.62              | 0.317                |                        | 12.54          | 13.26            | 12.07              | 4.35              | 28.39                      | 53.449                     |          |
| Min                  | 12.46                      | 3.89              | 0.290                |                        | 12.36          | 12.64            | 11.34              | 4.27              | 28.12                      | 52.300                     |          |
| Max                  | 14.12                      | 5.07              | 0.356                |                        | 12.78          | 13.89            | 12.52              | 4.44              | 28.64                      | 54.600                     |          |
| Std                  | 0.46                       | 0.35              | 0.021                |                        | 0.18           | 0.45             | 0.38               | 0.07              | 0.17                       | 0.842                      |          |

\* Not included in mean.

*Confidentiality Notice: The data contained herein are confidential and intended for subscriber use only. Data from other subscribers are included for comparison purposes only.*