

HPW-1

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

1/31/2014

| 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 6                  | 11.64                      | 5.16              | 0.292                |                        |                |                  | 11.28              | 4.90              | 30.22                      | 53.990                     |          |
| B 8                  | 11.95                      | 5.25              | 0.291                |                        | 11.27          | 11.57            | 11.12              | 4.95              | 30.39                      | 54.540                     | ICE-3    |
| B 10                 | 11.48                      | 5.82              | 0.286                |                        |                | 11.68            | 11.40              | 5.27              | 30.70                      | 51.900                     | ICE-3    |
| B 15                 | 10.34                      | 5.48              | 0.303                |                        |                |                  |                    |                   |                            |                            |          |
| B 17                 | 11.10                      | 5.40              | 0.316                |                        |                |                  |                    |                   |                            |                            |          |
| B 18                 |                            |                   |                      |                        |                |                  | 11.16              | 4.85              | 30.19                      | 53.490                     | ICE-3    |
| B 95                 | 11.69                      | 6.12              | 0.330                |                        |                |                  | 10.77              | 4.89              | 30.19                      | 51.990                     | ICE-3    |
| B 99                 | 11.37                      | 5.44              | 0.294                |                        | 11.11          | 11.75            |                    |                   |                            |                            |          |
| B 115                | 10.89                      | 5.64              | 0.312                |                        |                | 11.60            | 10.49              | 4.79              | 30.22                      | 53.860                     | ICE-3    |
| B 127                | 11.13                      | 5.28              | 0.303                |                        |                |                  |                    |                   |                            |                            |          |
| B 140                | 11.19                      | 5.70              | 0.290                |                        | 10.39          |                  |                    |                   |                            |                            |          |
| B 142                | 12.27                      | 5.53              | 0.334                |                        |                |                  | * 16.08            | * 5.90            | 30.08                      | 49.800                     |          |
| B 169                | 11.77                      | 5.50              | 0.310                |                        |                |                  | * 7.01             | * 2.54            | * 46.50                    | 54.330                     | ICE-3    |
| B 178                | 10.80                      | 5.42              | 0.312                |                        |                |                  | 9.79               | 4.53              | 30.60                      | 54.000                     | ICE-3    |
| B 184                |                            |                   |                      |                        |                |                  | 10.92              | 5.08              | 30.14                      | 52.400                     | ICE-3    |
| <b>N</b>             | <b>13</b>                  | <b>13</b>         | <b>13</b>            |                        | <b>3</b>       | <b>4</b>         | <b>8</b>           | <b>8</b>          | <b>9</b>                   | <b>10</b>                  |          |
| <b>Mean</b>          | <b>11.36</b>               | <b>5.52</b>       | <b>0.306</b>         |                        | <b>10.92</b>   | <b>11.65</b>     | <b>10.87</b>       | <b>4.91</b>       | <b>30.30</b>               | <b>53.030</b>              |          |
| <b>Min</b>           | <b>10.34</b>               | <b>5.16</b>       | <b>0.286</b>         |                        | <b>10.39</b>   | <b>11.57</b>     | <b>9.79</b>        | <b>4.53</b>       | <b>30.08</b>               | <b>49.800</b>              |          |
| <b>Max</b>           | <b>12.27</b>               | <b>6.12</b>       | <b>0.334</b>         |                        | <b>11.27</b>   | <b>11.75</b>     | <b>11.40</b>       | <b>5.27</b>       | <b>30.70</b>               | <b>54.540</b>              |          |
| <b>Std</b>           | <b>0.52</b>                | <b>0.26</b>       | <b>0.015</b>         |                        | <b>0.47</b>    | <b>0.08</b>      | <b>0.52</b>        | <b>0.21</b>       | <b>0.21</b>                | <b>1.488</b>               |          |

\* 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.*