

HPW-7

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

7/31/2016

| Subscriber<br>Number | <i>Spectrophotometric Methods</i> |                           |                              | <i>Conductometric Methods</i> |                        |                          | <i>HPLC Method</i>         |                           |                                    |                                    | Standard |
|----------------------|-----------------------------------|---------------------------|------------------------------|-------------------------------|------------------------|--------------------------|----------------------------|---------------------------|------------------------------------|------------------------------------|----------|
|                      | <i>Alpha<br/>Acids (%)</i>        | <i>Beta Acids<br/>(%)</i> | <i>Hop Storage<br/>Index</i> | <i>ASBC C.V.<br/>(%)</i>      | <i>EBC LCV<br/>(%)</i> | <i>MEBAK<br/>LCV (%)</i> | <i>Alpha Acids<br/>(%)</i> | <i>Beta Acids<br/>(%)</i> | <i>Cohumulone<br/>(% of total)</i> | <i>Colupulone<br/>(% of total)</i> |          |
| B 5                  | 11.52                             | 4.96                      | 0.308                        |                               | 11.02                  | 11.51                    | 10.86                      | 4.42                      | 28.96                              | 49.090                             | ICE-3    |
| B 6                  | 11.48                             | 4.67                      | 0.308                        |                               |                        |                          | 10.40                      | 4.22                      | 28.92                              | 51.530                             |          |
| B 8                  | 11.35                             | 4.76                      | 0.310                        |                               | 10.47                  | 11.56                    | 10.62                      | 4.24                      | 28.69                              | 52.050                             | ICE-3    |
| B 17                 | 12.18                             | 5.04                      | 0.320                        |                               |                        |                          |                            |                           |                                    |                                    |          |
| B 99                 | 11.13                             | 5.04                      | 0.318                        |                               | 10.63                  | 11.52                    |                            |                           |                                    |                                    |          |
| B 115                | 11.28                             | 4.75                      | 0.327                        |                               |                        | 11.40                    | 10.44                      | 4.28                      | 28.12                              | 51.640                             | ICE-3    |
| B 127                | 11.00                             | 4.84                      | 0.315                        |                               |                        |                          |                            |                           |                                    |                                    |          |
| B 140                | 10.62                             | 4.77                      | 0.310                        |                               |                        |                          | 10.34                      | 4.49                      | 28.60                              | 53.180                             | ICE-3    |
| B 142                | 9.53                              | 4.93                      | * 0.377                      |                               |                        |                          | 10.52                      | 4.35                      | 29.55                              | 49.640                             | ICE-3    |
| B 169                | 11.50                             | 4.80                      | * 0.350                      |                               |                        |                          | 10.40                      | 4.35                      | 28.33                              | 47.600                             | ICE-3    |
| B 178                | 10.46                             | 4.53                      | 0.307                        |                               |                        |                          | 10.30                      | 4.29                      | 28.50                              | 49.400                             | ICE-3    |
| B 183                |                                   |                           |                              |                               |                        |                          | 10.81                      | 4.29                      | 28.13                              | 50.150                             | ICE-3    |
| B 193                | 10.00                             | 4.70                      | 0.310                        |                               |                        |                          |                            |                           |                                    |                                    |          |
| <b>N</b>             | <b>12</b>                         | <b>12</b>                 | <b>10</b>                    |                               | <b>3</b>               | <b>4</b>                 | <b>9</b>                   | <b>9</b>                  | <b>9</b>                           | <b>9</b>                           |          |
| <b>Mean</b>          | <b>11.00</b>                      | <b>4.82</b>               | <b>0.313</b>                 |                               | <b>10.71</b>           | <b>11.50</b>             | <b>10.52</b>               | <b>4.33</b>               | <b>28.64</b>                       | <b>50.476</b>                      |          |
| <b>Min</b>           | <b>9.53</b>                       | <b>4.53</b>               | <b>0.307</b>                 |                               | <b>10.47</b>           | <b>11.40</b>             | <b>10.30</b>               | <b>4.22</b>               | <b>28.12</b>                       | <b>47.600</b>                      |          |
| <b>Max</b>           | <b>12.18</b>                      | <b>5.04</b>               | <b>0.327</b>                 |                               | <b>11.02</b>           | <b>11.56</b>             | <b>10.86</b>               | <b>4.49</b>               | <b>29.55</b>                       | <b>53.180</b>                      |          |
| <b>Std</b>           | <b>0.74</b>                       | <b>0.15</b>               | <b>0.007</b>                 |                               | <b>0.28</b>            | <b>0.07</b>              | <b>0.20</b>                | <b>0.09</b>               | <b>0.46</b>                        | <b>1.747</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.*