

MAL-4B

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

4/30/2017

| <i>Sub #</i> | <i>Moisture (%)</i> | <i>% Extract - Fine Ground (D.B.)</i> | <i>% Extract - Coarse Ground (D.B.)</i> | <i>% Fine - Coarse Difference</i> | <i>Conversion Time (min)</i> | <i>Clarity of Wort (visual)</i> | <i>Color of Wort, 1/2" cell (ASBC)</i> | <i>Diastatic Power, Salt Ext. (Deg.)</i> | <i>Alpha-amylase, Salt Ext.</i> | <i>Soluble Protein</i> | <i>Total Malt Protein</i> | <i>Soluble/Total Protein (D.B.)</i> |
|--------------|---------------------|---------------------------------------|-----------------------------------------|-----------------------------------|------------------------------|---------------------------------|----------------------------------------|------------------------------------------|---------------------------------|------------------------|---------------------------|-------------------------------------|
| B 25         | 3.9                 | 79.7                                  | 78.8                                    | 0.9                               |                              |                                 | 1.97                                   | 197                                      | 62.0                            | 6.20                   | 12.5                      | 49.5                                |
| B 30         | 4.0                 | 79.9                                  | 78.8                                    | 1.1                               |                              |                                 | 2.17                                   | 188                                      | 71.4                            | 6.01                   | 12.2                      | 49.2                                |
| B 32         | 4.1                 | 79.8                                  | 78.9                                    | 0.9                               |                              |                                 | 1.73                                   | 211                                      | 77.5                            | 6.17                   | 12.6                      | 48.8                                |
| B 43         | 4.1                 | 80.2                                  | 79.1                                    | 1.1                               | 5                            | HAZY                            | 1.80                                   | 199                                      | 60.4                            | 6.05                   | 12.8                      | 47.4                                |
| B 54         | 3.8                 | 80.0                                  | 78.9                                    | 1.1                               | 5                            | HAZY                            | 1.73                                   | 200                                      | 68.4                            | 6.08                   | 12.5                      | 48.6                                |
| B 55         | 4.5                 | 81.1                                  | * 80.6                                  | * 0.5                             |                              |                                 | 1.96                                   | 204                                      | 75.8                            | 6.00                   | 12.3                      | 48.3                                |
| B 109        | 4.4                 | 80.5                                  |                                         |                                   |                              |                                 | 2.20                                   | 201                                      | 77.7                            | 6.21                   | 12.9                      | 48.1                                |
| B 129        | 4.1                 | 80.3                                  | 79.4                                    | 1.0                               | 5                            | LIGHTLY HAZ                     | 1.82                                   | 201                                      | 71.9                            | 5.90                   | 12.8                      | 47.0                                |
| B 180        | 4.1                 | 80.4                                  | 79.3                                    | 1.1                               | 5                            | HAZY                            | 1.80                                   | 193                                      | 66.0                            | 5.94                   | 12.6                      | 47.2                                |
| B 189        | 3.7                 | 79.6                                  | 78.5                                    | 1.1                               | 5                            | HAZY                            | 1.76                                   | 195                                      | 70.5                            | 5.89                   | 12.5                      | 47.0                                |
| B 213        | 3.8                 | 79.4                                  | 78.5                                    | 0.9                               |                              |                                 | 1.75                                   | 207                                      | 73.7                            | 6.16                   | 12.4                      | 49.6                                |
| <b>N</b>     | <b>11</b>           | <b>11</b>                             | <b>9</b>                                | <b>9</b>                          |                              |                                 | <b>11</b>                              | <b>11</b>                                | <b>11</b>                       | <b>11</b>              | <b>11</b>                 | <b>11</b>                           |
| <b>Mean</b>  | <b>4.0</b>          | <b>80.1</b>                           | <b>78.9</b>                             | <b>1.0</b>                        |                              |                                 | <b>1.88</b>                            | <b>199.5</b>                             | <b>70.5</b>                     | <b>6.06</b>            | <b>12.6</b>               | <b>48.2</b>                         |
| <b>Min</b>   | <b>3.7</b>          | <b>79.4</b>                           | <b>78.5</b>                             | <b>0.9</b>                        |                              |                                 | <b>1.73</b>                            | <b>188</b>                               | <b>60.4</b>                     | <b>5.89</b>            | <b>12.2</b>               | <b>47.0</b>                         |
| <b>Max</b>   | <b>4.5</b>          | <b>81.1</b>                           | <b>79.4</b>                             | <b>1.1</b>                        |                              |                                 | <b>2.20</b>                            | <b>211</b>                               | <b>77.7</b>                     | <b>6.21</b>            | <b>12.9</b>               | <b>49.6</b>                         |
| <b>Std</b>   | <b>0.3</b>          | <b>0.5</b>                            | <b>0.3</b>                              | <b>0.1</b>                        |                              |                                 | <b>0.17</b>                            | <b>6.3</b>                               | <b>5.8</b>                      | <b>0.12</b>            | <b>0.2</b>                | <b>1.0</b>                          |

\* Not Included in Mean

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| Sub #       | Growth of Acrospires |            |            |             |             | Screen Assortment |             |            |            | FAN<br>(ppm) | Absolute<br>Viscosity | Turbidity<br>(NTU) | Beta Glucan<br>wort (mg/L) |
|-------------|----------------------|------------|------------|-------------|-------------|-------------------|-------------|------------|------------|--------------|-----------------------|--------------------|----------------------------|
|             | 0-1/4                | 1/4-1/2    | 1/2-3/4    | 3/4-1       | Overgrown   | On 7/64"          | On 6/64"    | On 5/64"   | Thru 5/64" |              |                       |                    |                            |
| B 25        | 1                    | 0          | 6          | 68          | 25          | 64.3              | 29.5        | 4.6        | 1.6        | 247.0        | 1.49                  | 14.0               | 109                        |
| B 30        | 0                    | 2          | 1          | 76          | 21          | 66.2              | 26.3        | 5.7        | 1.8        | 259.0        | 1.48                  | 13.7               | 105                        |
| B 32        |                      |            |            |             |             | 63.1              | 30.6        | 5.7        | 0.6        | 263.0        |                       | 15.0               | 84                         |
| B 43        | 2                    | 4          | 6          | 83          | 5           | 67.4              | 26.3        | 4.5        | 1.8        | 252.0        | 1.49                  | 16.1               | 95                         |
| B 54        |                      |            |            |             |             | 61.6              | 30.1        | 6.4        | 1.9        | 273.0        | 1.47                  | 14.1               | 91                         |
| B 55        |                      |            |            |             |             |                   |             |            |            | 253.7        | 1.46                  |                    | 72                         |
| B 109       | 0                    | 6          |            |             | 36          | 64.4              | 29.9        | 4.1        | 1.6        | 274.0        | 1.48                  | 16.7               | 100                        |
| B 129       | 0                    | 4          | 9          | 82          | 5           | 66.1              | 28.1        | 4.2        | 1.6        | 299.5        | 1.48                  | 17.6               | 99                         |
| B 180       | 0                    | 3          | 3          | 71          | 23          | 66.7              | 27.3        | 4.5        | 1.5        | 286.0        | 1.47                  | 14.1               | 90                         |
| B 189       |                      |            |            |             |             | 67.5              | 27.0        | 4.0        | 1.5        | 249.0        | 1.48                  | 16.7               | 86                         |
| B 213       |                      |            |            |             |             | 65.5              | 29.2        | 4.8        | 0.5        | 256.0        |                       | 15.0               | 105                        |
| <b>N</b>    | <b>6</b>             | <b>6</b>   | <b>5</b>   | <b>5</b>    | <b>6</b>    | <b>10</b>         | <b>10</b>   | <b>10</b>  | <b>10</b>  | <b>11</b>    | <b>9</b>              | <b>10</b>          | <b>11</b>                  |
| <b>Mean</b> | <b>0.5</b>           | <b>3.2</b> | <b>5.0</b> | <b>76.0</b> | <b>19.2</b> | <b>65.3</b>       | <b>28.4</b> | <b>4.8</b> | <b>1.4</b> | <b>264.7</b> | <b>1.48</b>           | <b>15.3</b>        | <b>94.1</b>                |
| <b>Min</b>  | <b>0.0</b>           | <b>0.0</b> | <b>1.0</b> | <b>68.0</b> | <b>5.0</b>  | <b>61.6</b>       | <b>26.3</b> | <b>4.0</b> | <b>0.5</b> | <b>247.0</b> | <b>1.46</b>           | <b>13.7</b>        | <b>72.0</b>                |
| <b>Max</b>  | <b>2.0</b>           | <b>6.0</b> | <b>9.0</b> | <b>83.0</b> | <b>36.0</b> | <b>67.5</b>       | <b>30.6</b> | <b>6.4</b> | <b>1.9</b> | <b>299.5</b> | <b>1.49</b>           | <b>17.6</b>        | <b>109.0</b>               |
| <b>Std</b>  | <b>0.8</b>           | <b>2.0</b> | <b>3.1</b> | <b>6.6</b>  | <b>12.1</b> | <b>1.9</b>        | <b>1.6</b>  | <b>0.8</b> | <b>0.5</b> | <b>16.7</b>  | <b>0.01</b>           | <b>1.4</b>         | <b>10.9</b>                |

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