

# 2016/12/10 - Mass Dilution Ale (MDA)

| Name         | Mass Dilution Ale (MDA) |                                                                          |                                |            |
|--------------|-------------------------|--------------------------------------------------------------------------|--------------------------------|------------|
| Style        | Munich Helles           |                                                                          | Brew Date                      | 2016-12-10 |
| Type         | All Grain               |                                                                          | Boil Size                      | 27.0 gal   |
| IBU's        | 24.5                    |                                                                          | Batch Size                     | 24.0 gal   |
| Color        | 2.9 SRM                 |                                                                          | Boil Time                      | 60 min     |
|              |                         |                                                                          |                                |            |
|              | Estimated               |                                                                          | Actual                         |            |
| Pre-Boil OG  | 1.036                   |                                                                          |                                |            |
| OG           | 1.039                   |                                                                          | 1.038                          |            |
| FG           | 1.009                   |                                                                          | 1.009                          |            |
| ABV          | 4.0%                    |                                                                          | 4.0%                           |            |
| Efficiency   | 80.0%                   |                                                                          |                                |            |
|              |                         |                                                                          |                                |            |
| Grain        | 1.0 lbs                 | Weyermann Carafoam                                                       |                                | 2.9%       |
|              | 34.0 lbs                | Canadian 2-Row <ul style="list-style-type: none"><li>2014 Fall</li></ul> |                                | 97.1%      |
|              |                         |                                                                          |                                |            |
| Mash         | 75 mins                 | 150 F                                                                    | Infusion                       |            |
|              | 10 mins                 | 168 F                                                                    | Mash Out                       |            |
|              |                         |                                                                          |                                |            |
| Hops         | 60 mins                 | 10.0 oz                                                                  | Hallertauer Mittelfrueh (2.5%) | 19.8 IBU   |
|              | 30 mins                 | 1.0 oz                                                                   | Hallertauer Mittelfrueh (4.0%) | 2.4 IBU    |
|              | 15 mins                 | 1.0 oz                                                                   | Hallertauer Mittelfrueh (4.0%) | 1.6 IBU    |
|              |                         |                                                                          |                                |            |
| Additions    | 15 min                  | 2.0                                                                      | Whirlfloc Tablet               |            |
|              | 15 min                  | 0.0                                                                      | Wort Immersion Chiller         |            |
|              |                         |                                                                          |                                |            |
| Yeast        | 8.0                     | Saflager W-34/70                                                         |                                |            |
|              |                         |                                                                          |                                |            |
| Fermentation | Primary                 | 14 days                                                                  | 53.0 F                         |            |
|              | Cold Crash              | 3 days                                                                   | 37.0 F                         |            |
|              | Lager                   | 28 days                                                                  | 53.0 F                         |            |
|              | Bottle/Keg              | 0 days                                                                   | 37.0 F                         |            |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Notes</b> | <p>Double batch. Diluting to 24 gal.</p> <p>Water balanced to<br/>Ca: 54, Mg: 10, Na: 19, Cl: 75, SO4: 74</p> <p>Mashed with 12 gal instead of 13.</p> <p>Set HLT to 160. Mashed in and set HLT to 152. Pretty much perfect.</p> <p>Pre boil sg: 1074</p> <p>Boiled over again maybe 20 min into boil.</p> <p>Dons carboys at 5g at 1040</p> <p>My carboys at 6g and 1038</p> <p>Jan 19 - Delicious. So at least 3 weeks lagering.</p> |