

Märzen

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Date: 8/6/2008
Category: 3 - European Amber Lager
Subcategory: B - Oktoberfest/Märzen



Kettle Volume: 13.71 gal (SG: 1.043)
Boil Duration: 90.0 min
Evaporation: 2.25 gal
Volume Gain/Loss: 0.0 gal
Final Volume: 11.0 gal (SG: 1.053)

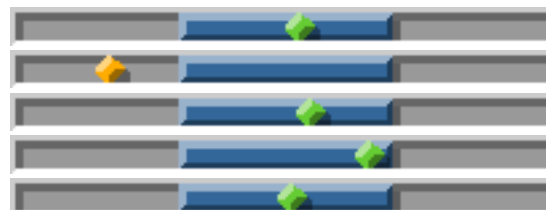
Efficiency: 85%
Attenuation: 80.0%
Evap/Hour: 1.5 gal

Ingredients:

8.0 lbs Pilsner Malt
6.0 lbs Munich Malt
4.0 lbs Vienna Malt
1.0 lbs Caravienna
0.5 lbs Caramunich
0.5 lbs Aromatic Malt
3.0 oz Hallertau Hersbruck (4.0%) - added during boil, boiled 60 min
1.0 oz Hallertau Hersbruck (4.0%) - added during boil, boiled 20 min
4.4 ea White Labs WLP820 Oktoberfest/Märzen
4.4 tsp Irish Moss - added during boil, boiled 10 min
2.2 tbs 5.2 pH Stabilizer - added during mash

Style Comparison:

Recipe	Guideline
Original Gravity: 1.053	1.050 - 1.056
Terminal Gravity: 1.011	1.012 - 1.016
Color: 11.3 °SRM	7.0 - 14.0
Alcohol: 5.6%	4.8% - 5.7%
Bitterness: 24.24	20.0 - 28.0



Analysis:

Apparent	Real	Weight	Calories
Original Extract: 13.19 °P	13.19 °P	Alcohol: 15.8 g	108.96
Attenuation: 80.0%	64.3%	Carbs: 16.5 g	62.82
Terminal Extract: 2.73 °P	4.71 °P	Protein: 1.2 g	4.63
% Alcohol: 5.6% ABV	4.4% ABW		Total: 176.4

Schedule:

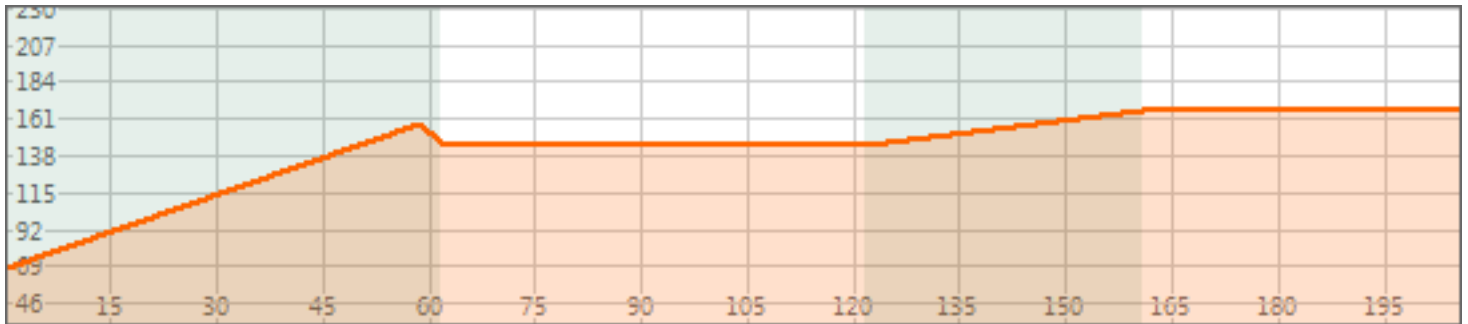
Ambient Air: 70.0 °F
Source Water: 60.0 °F
Elevation: 0.0 m

01:01:38 Mash In
 Liquor: 6.25 gal
 Strike: 160.0 °F
 Target: 148 °F

02:01:38 Saccharification Rest
 Rest: 60.0 min
 Final: 146.4 °F

02:40:55 Mash Out
 Heat: 39.3 min
 Target: 168.0 °F

03:25:55 Sparge
 Sparge
 Volume: 9.25 gal
 Temperature: 170.0 °F
 Runoff: 13.15 gal
 Duration: 45.0 min
 Total Runoff: 13.49 gal



Carbonation:

Natural Conditioning

Beer Temp: 68.0 °F
 Priming Agent Rate: 4.02 g/L
 Priming Agent Mass: 274.272 g
 Volumes CO2: 2.5

Forced Carbonation

Beer Temp: 45.0 °F
 Pressure: 14.8861 PSI
 Volumes CO2: 2.5