

# Vienna Lager

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Category: 3 - European Amber Lager  
Subcategory: A - Vienna Lager



Kettle Volume: 13.71 gal (S.G.: 1.043)  
Boil Duration: 90.0 min  
Evaporation: 2.25 gal  
Water Volume Added: 0.0 gal  
Final Volume: 11.01 gal (S.G.: 1.053)

Efficiency: 85.0%  
Attenuation: 76.0%  
Evap/Hour: 1.5 gal

## Ingredients:

10.5 lb Vienna Malt  
8.5 lb Munich Malt  
1.0 lb Caramunich 60  
2.5 oz Hallertau (4.5%) - added during boil, boiled 75.0 min  
1.0 oz Hallertau (4.5%) - added during boil, boiled 15.0 min  
3.0 ea White Labs WLP838 Southern German Lager

## Style:

Recipe	Guideline
Original Gravity: 1.053	1.046 - 1.052
Terminal Gravity: 1.013	1.010 - 1.014
Color: 12.14 °SRM	10.0 - 16.0
Alcohol: 5.28%	4.5% - 5.5%
Bitterness: 22.8	18.0 - 30.0



## Analysis:

Apparent	Real	Weight	Calories
Original Extract: 13.09 °P	13.09 °P	Alcohol: 19.85 g	137.0 kcal
Attenuation: 76.0%	61.0%	Carbs: 24.0 g	91.22 kcal
Terminal Extract: 3.25 °P	5.11 °P	Protein: 1.68 g	6.72 kcal
% Alcohol: 5.28% ABV	4.14% ABW		Total: 234.94 kcal

## Schedule:

Ambient Air: 70.0 °F  
Source Water: 45.0 °F  
Elevation: 600.0 ft

	Elapsed	Thickness	Final Temp	Available
<b>10.0 min Dough-In</b> <i>Liquor: 6.25 gal</i> <i>Strike: 129.98 °F</i> <i>Target: 122.0 °F</i>	00:10:00	1.25 qt/lb	122.0 °F	3.93 gal
<b>30.0 min Protein Rest</b> <i>Rest: 30.0 min</i> <i>Final: 122.0 °F</i>	00:40:00	1.25 qt/lb	122.0 °F	3.93 gal

	<b>Elapsed</b>	<b>Thickness</b>	<b>Final Temp</b>	<b>Available</b>
<b>12.1 min HERMS to Sach Rest</b> <i>Heat: 12.1 min</i> <i>Target: 150.0 °F</i>	00:52:06	1.25 qt/lb	150.0 °F	3.96 gal
<b>75.0 min Sach Rest</b> <i>Rest: 75.0 min</i> <i>Final: 150.0 °F</i>	02:07:06	1.25 qt/lb	150.0 °F	3.96 gal
<b>15.0 min Mash-out</b> <i>Heat: 15.0 min</i> <i>Target: 170.0 °F</i>	02:22:06	1.25 qt/lb	170.0 °F	3.99 gal
<b>45.0 min Sparge</b> <i>Sparge Volume: 21.0 gal</i> <i>Sparge Temperature: 168.0 °F</i> <i>Runoff: 13.49 gal</i>	03:07:06	0.0 qt/lb	168.5 °F	12.04 gal

