

# Belgian Dubbel

Author:  
Date: 2/6/08  
Category: 18 - Belgian Strong Ale  
Subcategory: E - Belgian Dark Strong Ale



Kettle Volume: 13.71 gal (SG: 1.069)  
Boil Duration: 90.0 min  
Evaporation: 2.25 gal  
Volume Gain/Loss: 0.0 gal  
Final Volume: 11.0 gal (SG: 1.087)

Efficiency: 78.0%  
Attenuation: 82.0%  
Evap/Hour: 1.5 gal

## Ingredients:

27.0 lbs Pilsen Malt  
1.0 lbs Cara 45 - Caramel Malt  
0.75 lbs Aromatic Malt (Amber 50)  
0.5 lbs Special B - Caramel malt  
0.5 lbs British Black Patent  
3.25 lbs Candi Sugar Dark  
1.0 oz Horizon (12.0%) - added during boil, boiled 90 min  
1.0 oz Hallertau Hersbruck (4.5%) - added during boil, boiled 15 min  
0.5 oz Hallertau Hersbruck (4.5%) - added during boil, boiled 5 min  
4.4 tsp Irish Moss - added during boil, boiled 15 min  
0.5 tsp Grains of Paradise - added during boil, boiled 5 min  
3.0 ea White Labs WLP500 Trappist Ale

## Style Comparison:

Recipe	Guideline	
Original Gravity: 1.087	1.075 - 1.110	
Terminal Gravity: 1.016	1.010 - 1.024	
Color: 30.1 °SRM	15.0 - 20.0	
Alcohol: 9.39%	8.0% - 12.0%	
Bitterness: 24.87	15.0 - 25.0	

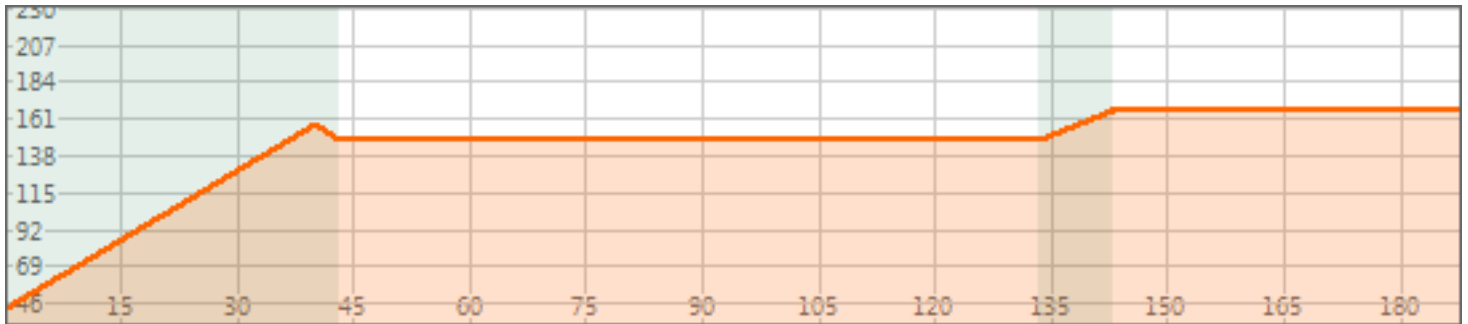
## Analysis:

Apparent	Real	Weight	Calories
Original Extract: 20.77 °P	20.77 °P	Alcohol: 26.5 g	182.55
Attenuation: 82.0%	65.2%	Carbs: 25.7 g	97.58
Terminal Extract: 3.97 °P	7.22 °P	Protein: 1.8 g	7.19
% Alcohol: 9.39% ABV	7.34% ABW		Total: 287.32

## Schedule:

Ambient Air: 45 °F  
Source Water: 45 °F  
Elevation: 0.0 m

00:43:11 Mash In  
Liquor: 11.16 gal  
Strike: 159.1 °F  
Target: 149 °F  
02:13:11 Saccharification Rest  
Rest: 90 min  
Final: 149.0 °F  
02:22:53 Mash Out  
Heat: 9.7 min  
Target: 168.0 °F  
03:07:53 Sparge  
Sparge  
Volume: 5.24 gal  
Temperature: 170.0 °F  
Runoff: 12.9 gal  
Duration: 45.0 min  
Total Runoff: 13.24 gal



---

### Carbonation:

#### Natural Conditioning

Beer Temp: 68.0 °F  
Priming Agent Rate: 4.02 g/L  
Priming Agent Mass: 274.272 g  
Volumes CO<sub>2</sub>: 2.5

#### Forced Carbonation

Beer Temp: 45.0 °F  
Pressure: 14.8861 PSI  
Volumes CO<sub>2</sub>: 2.5