

# Rye IPA

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Date: 3/26/08  
Category: 14 - India Pale Ale (IPA)  
Subcategory: C - Imperial IPA



Kettle Volume: 13.71 gal (SG: 1.061)  
Boil Duration: 90.0 min  
Evaporation: 2.25 gal  
Volume Gain/Loss: 0.0 gal  
Final Volume: 11 gal (SG: 1.076)

Efficiency: 80.0%  
Attenuation: 78.0%  
Evap/Hour: 1.5 gal

## Ingredients:

17.0 lbs Pale Ale Malt  
5.0 lbs Rye Malt  
2.75 lbs Rye Flaked  
2.50 lbs Munich Malt  
1.25 lbs Wheat Malt  
1.25 lbs Cara-Pils® Malt  
8.0 oz Black Malt  
1.5 lbs Rice Hulls  
2.0 oz Columbus (12.2%) - added during boil, boiled 60 min  
1.0 oz Centennial (9.7%) - added during boil, boiled 30 min  
1.5 oz Nugget (13.0%) - added during boil, boiled 30 min  
2.0 tsp Irish Moss - added during boil, boiled 15 min  
2.0 tsp Servomyces - added during boil, boiled 10 min  
2.0 oz Cascade (5.5%) - added during boil, boiled 5 min  
2.5 oz Cascade (5.5%) - added dry to secondary fermenter  
1.0 oz Centennial (10.0%) - added dry to secondary fermenter  
3 tbsp 5.2 pH Stabilizer - added during mash  
3 ea White Labs WLP001 California Ale

## Style Comparison:

Recipe	Guideline
Original Gravity: 1.076	1.075 - 1.090
Terminal Gravity: 1.017	1.012 - 1.020
Color: 17.2 °SRM	8.0 - 15.0
Alcohol: 7.77%	7.5% - 10.0%
Bitterness: 81.06	60.0 - 100.0



## Analysis:

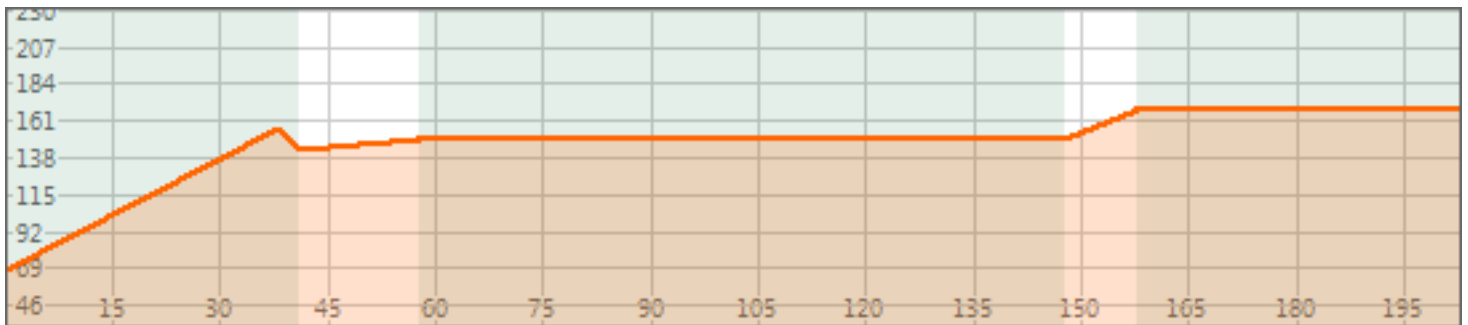
Apparent	Real	Weight	Calories
Original Extract: 18.29 °P	18.29 °P	Alcohol: 21.9 g	151.13
Attenuation: 78.0%	62.1%	Carbs: 24.7 g	93.68
Terminal Extract: 4.23 °P	6.93 °P	Protein: 1.7 g	6.9
% Alcohol: 7.77% ABV	6.07% ABW		Total: 251.71

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**Schedule:**

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

00:41:05 Mash In  
Liquor: 11.91 gal  
Strike: 157.2 °F  
Target: 145.0 °F  
00:57:48 HERMS  
Heat: 16.7 min  
Target: 152.0 °F  
02:27:48 Rest  
Rest: 90 min  
Final: 152.0 °F  
02:38:02 Mash Out  
Heat: 10.2 min  
Target: 170 °F  
03:23:02 Sparge  
Sparge  
Volume: 4.98 gal  
Temperature: 170.0 °F  
Runoff: 13.15 gal  
Duration: 45.0 min  
Total Runoff: 13.49 gal



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**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