

# Scotch Ale

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Category: 9 - Scottish and Irish Ale  
Subcategory: E - Strong Scotch Ale



Kettle Volume: 13.71 gal (S.G.: 1.081)  
Boil Duration: 90.0 min  
Evaporation: 2.25 gal  
Water Volume Added: 0.0 gal  
Final Volume: 11.0 gal (S.G.: 1.100)

Efficiency: 85.0%  
Attenuation: 74.0%  
Evap/Hour: 1.5 gal

## Ingredients:

31.0 lb Muntons Pale  
1.5 lb Oats Flaked  
1.0 lb Amber Malt  
1.0 lb Biscuit Malt  
1.0 lb Crystal Malt 40°L  
0.5 lb Roast Barley  
1.0 lb CBW® Pilsen Light Liquid (DRY)  
3.5 oz Goldings (4.4%) - added during boil, boiled 60.0 min  
1.0 oz Goldings (4.4%) - added during boil, boiled 10.0 min  
3.0 ea White Labs WLP028 Edinburgh Ale

## Style:

Recipe	Guideline
Original Gravity: 1.100	1.070 - 1.130
Terminal Gravity: 1.026	1.018 - 1.030
Color: 18.88 °SRM	14.0 - 25.0
Alcohol: 9.88%	6.5% - 10.0%
Bitterness: 29.2	17.0 - 35.0



## Analysis:

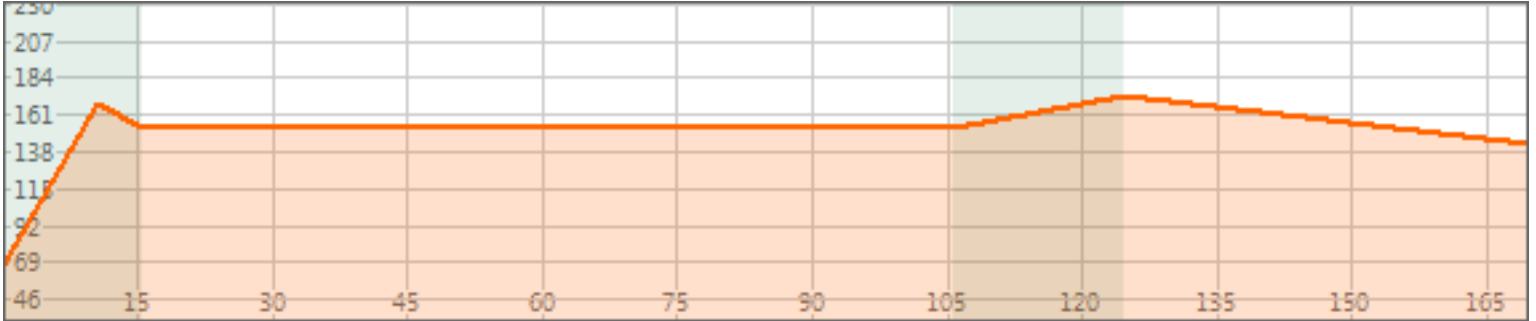
Apparent	Real	Weight	Calories
Original Extract: 23.82 °P	23.82 °P	Alcohol: 27.84 g	192.1 kcal
Attenuation: 74.0%	58.2%	Carbs: 35.91 g	136.48 kcal
Terminal Extract: 6.59 °P	9.96 °P	Protein: 2.51 g	10.06 kcal
% Alcohol: 9.88% ABV	7.65% ABW		Total: 338.63 kcal

## Schedule:

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

	Elapsed	Thickness	Final Temp	Available
<b>15.6 min Dough-In</b> <i>Liquor: 11.25 gal</i> <i>Strike: 169.59 °F</i> <i>Target: 155.0 °F</i>	00:15:35	2.61 L/kg	155.0 °F	7.17 gal

	Elapsed	Thickness	Final Temp	Available
<b>90.0 min Alpha-Amaylase Rest</b> <i>Rest: 90.0 min</i> <i>Final: 155.0 °F</i>	01:45:35	2.61 L/kg	155.0 °F	7.17 gal
<b>19.0 min Mash-Out</b> <i>Heat: 19.0 min</i> <i>Target: 175.0 °F</i>	02:04:35	2.61 L/kg	175.0 °F	7.22 gal
<b>45.0 min Sparge</b> <i>Sparge Volume: 18.0 gal</i> <i>Sparge Temperature: 168.0 °F</i> <i>Runoff: 13.56 gal</i>	02:49:35	0.0 L/kg	143.8 °F	11.89 gal



**Notes:**

- Pitch yeast at 60 degrees, let rise no higher than 65 F
- Cold condition