

## Centennial Pale Ale v1 - 6.8%

### American Pale Ale

Author: EspeciallyBitter@homebrewinguk.com

Type: All Grain

IBU : 90 (Tinseth)  
 BU/GU : 1.44  
 Colour : 23 EBC  
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.046  
 Original Gravity : 1.060  
 Total Gravity : 1.062  
 Final Gravity : 1.010

### Fermentables (1.52 kg)

1.196 kg - Pale Ale Malt 2-Row 7.9 EBC (78.9%)  
 236 g - Munich II 16.7 EBC (15.6%)  
 84 g - English Crystal Malt 150 EBC (5.5%)  
 30 g - Bottling - Sugar, Table (Sucrose) 2 EBC  
 ^ Albert Heijn (NL)

### Hops (52.8 g)

60 min - 2.6 g - Centennial - 9% (11 IBU)  
 ^ Worcester Hop Shop (UK)  
 60 min - 2.6 g - Horizon - 12% (14 IBU)  
 50 min - 2.8 g - Centennial - 9% (11 IBU)  
 ^ Worcester Hop Shop (UK)  
 40 min - 3.4 g - Centennial - 9% (13 IBU)  
 ^ Worcester Hop Shop (UK)  
 30 min - 3.4 g - Centennial - 9% (11 IBU)  
 ^ Worcester Hop Shop (UK)  
 20 min - 5 g - Centennial - 9% (13 IBU)  
 ^ Worcester Hop Shop (UK)  
 10 min - 5 g - Centennial - 9% (9 IBU)  
 ^ Worcester Hop Shop (UK)  
 5 min - 5.6 g - Centennial - 9% (6 IBU)  
 ^ Worcester Hop Shop (UK)

### Hop Stand

10 min hopstand @ 80 °C  
 10 min - 5.6 g - Centennial - 9% (2 IBU)

### Dry Hops

4 days - 16.8 g - Centennial - 9%

### Miscellaneous

Mash - 0.83 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 0.53 g - Calcium Chloride (CaCl2) 33 %...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.51 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 1.23 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 3.26 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 0.2 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3

### Yeast

### 01 Brouwpunt 5L (60min) (rev 4)

Batch Size : 5.6 L  
 Boil Size : 7.76 L  
 Post-Boil Vol : 5.96 L

Mash Water : 4.55 L  
 Sparge Water : 4.79 L  
 Boil Time : 60 min  
 Total Water : 9.34 L



23 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

01 One Step Mash (90 min)  
 72.1 °C - Strike Temp  
 66 °C - 90 min - Temperature

### Fermentation Profile

01 Ale + DR + Conditioning  
 18 °C - 10 days - Primary  
 21 °C - 4 days - Diacetyl rest  
 18 °C - 14 days - Carbonation  
 18 °C - 28 days - Conditioning

### Water Profile

02 NL Spa Reine Flat Mineral Water ([www.ah.nl...](http://www.ah.nl...))  
 Ca 93 Mg 15 Na 49 Cl 50 SO 250

SO/Cl ratio: 5  
 Mash pH: 5.4  
 Sparge pH: 6

### Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume:

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## Recipe Notes

Target: ABV = 6.7 %, IBU = 70, EBC = 34, OG = 1.065, FG = 1.013.