

## Berliner Braun Bitterbier - 7.1%

### Historical Beer

Author: Based on Krennmair's Historic German...

Type: All Grain

IBU : 82 (Tinseth)  
BU/GU : 1.25  
Colour : 49 EBC  
Carbonation : 2 CO2-vol

Pre-Boil Gravity : 1.045  
Original Gravity : 1.066  
Final Gravity : 1.012

### Fermentables (1.66 kg)

1.625 kg - Munich Dark 30.5 EBC (98.1%)  
32 g - Black Malt 985 EBC (1.9%)

### Hops (38.5 g)

First Wort 90 - 21 g - Liberty - 5% (57 IBU)  
First Wort 90 - 17.5 g - spalt - 2.6% (25 IBU)

### Miscellaneous

Mash - 0.52 g - Baking Soda (NaHCO3)  
^ Lot # 41190621/3  
^ Brouwstore (NL) 003.106.2  
Mash - 0.44 g - Calcium Chloride (CaCl2) 33 %...  
^ Lot # 115038  
^ Brouwstore (NL) 055.035.0  
Mash - 0.43 g - Canning Salt (NaCl)  
^ Albert Heijn (NL)  
Mash - 0.87 g - Epsom Salt (MgSO4)  
^ Lot # /2119000091  
^ Brouwstore (NL) 055.027.7  
Mash - 0.88 g - Gypsum (CaSO4)  
^ The Malt Miller (UK) CHE-03-004  
15 min - Boil - 1.988 ml - irish moss

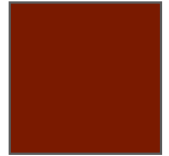
### Yeast

0.6 pkg - Fermentis / Safale Safale - German...

### 01 Brouwpunt 5L (90min) (rev 4)

Batch Size : 5.6 L  
Boil Size : 8.66 L  
Post-Boil Vol : 5.96 L

Mash Water : 4.97 L  
Sparge Water : 5.4 L  
Boil Time : 90 min  
Total Water : 10.37 L



49 EBC

Brewhouse Efficiency: 71.8%  
Mash Efficiency: 73.3%

### Mash Profile

Mash Steps  
66.6 °C - Strike Temp  
61.1 °C - 30 min - strike water 162  
76.1 °C - 120 min - strike water boiling  
79.4 °C - 10 min - Infusion

### Fermentation Profile

01 Ale + DR + Conditioning  
15 °C - 10 days - Primary  
19 °C - 4 days - Diacetyl rest  
15 °C - 14 days - Carbonation  
15 °C - 28 days - Conditioning

### Water Profile

02 NL Spa Reine Flat Mineral Water (www.ah.nl...  
Ca 30 Mg 10 Na 33 Cl 39 SO 84 HCO 53

SO/Cl ratio: 2.2  
Mash pH: 5.26  
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: