

## Blackheart Schwarzbier - 5%

### Schwarzbier

Author: Pig Den Brewing

Type: All Grain

IBU : 29 (Tinseth)  
 BU/GU : 0.6  
 Colour : 39 EBC  
 Carbonation : 2.3 CO2-vol

Pre-Boil Gravity : 1.034  
 Original Gravity : 1.049  
 Final Gravity : 1.011

### Fermentables (1.21 kg)

802 g - Pilsner (Weyermann) 6.5 EBC (66.5%)  
 345 g - Munich I (Weyermann) 14 EBC (28.6%)  
 59 g - Carafa Special II (Weyermann) 820 EBC...

### Hops (27 g)

60 min - 12.6 g - Hallertau - 2.9% (19 IBU)  
 15 min - 14.4 g - Hallertau - 2.9% (11 IBU)

### Miscellaneous

Mash - 0.7 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 2.47 g - Calcium Chloride (CaCl2) 33 %...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.7 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 0.22 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 0.22 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 0.8 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 15 min - Boil - 0.267 tsp - Polyclar Brewbrite  
 10 min - Boil - 0.267 tsp - Yeast Nutrients

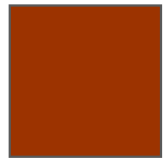
### Yeast

0.8 pkg - Mangrove Jack's Bavarian Lager M76

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

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

Mash Water : 3.62 L  
 Sparge Water : 6.32 L  
 Boil Time : 90 min  
 Total Water : 9.94 L



39 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

Temperature Mash, 1 Step, Full Body  
 71.6 °C - Strike Temp  
 65.5 °C - 60 min - Saccharification  
 75.6 °C - 10 min - Mash Out

### Fermentation Profile

Imported  
 12.2 °C - 10 days - Primary  
 12.2 °C - 10 days - Secondary  
 15.6 °C - 7 days - Conditioning

### Water Profile

02 NL Spa Reine Flat Mineral Water (www.ah.nl...)  
 Ca 40 Mg 4 Na 50 Cl 100 SO 25

SO/Cl ratio: 0.3  
 Mash pH: 5.38  
 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:

### Recipe Notes

Add carafa II with 10 minutes left in mash bohemian/german lager yeast.  
 Pitch 8 grams of yeast.