

## 46 Blackened - 7.9%

### Black IPA

Author: The Thirsty Otter

Type: All Grain

IBU : 61 (Tinseth)  
 Colour : 79 EBC  
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.051  
 Post-Boil Gravity : 1.071  
 Original Gravity : 1.073  
 Final Gravity : 1.013

### Fermentables (1.75 kg)

1.5 kg - Maris Otter Pale Ale Malt 5.9 EBC (8...  
 ^ Lot # 67-200827-161058-155815-1/1  
 ^ The Malt Miller (UK) MAL-00-036  
 140 g - Munich Malt I 15 EBC (8%)  
 ^ The Malt Miller (UK) MAL-00-017  
 55 g - Black Malt 1340 EBC (3.1%)  
 ^ The Malt Miller (UK) MAL-  
 55 g - Carafa Special Type 3 1400 EBC (3.1%)  
 ^ The Malt Miller (UK) MAL-01-009  
 30 g - Bottling - Sugar, Table (Sucrose) 2 EBC  
 ^ Albert Heijn (NL)

### Hops (77.4 g)

30 min - 4.7 g - Centennial - 9% (15 IBU)  
 ^ Worcester Hop Shop (UK)  
 30 min - 4.7 g - Citra - 13.8% (23 IBU)  
 ^ Worcester Hop Shop (UK)

### Hop Stand

30 min hopstand @ 77 °C  
 30 min 77 °C - 17 g - Centennial - 9% (9 IBU)  
 30 min 77 °C - 17 g - Citra - 13.5% (14 IBU)

### Dry Hops

Day 9 - 17 g - Centennial - 9%  
 Day 9 - 17 g - Citra - 13.5%

### Miscellaneous

Mash - 0.38 ml - Calcium Chloride (CaCl2) 33...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.51 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 0.56 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 1.3 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 Sparge - 0.86 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3

### Yeast

0.5 pkg - Fermentis Safale American US-05  
 ^ Lot # 52766 1049 269  
 ^ The Malt Miller (UK) YEA-02-025

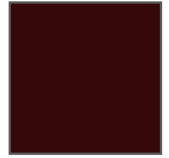
### 01 Brouwpunt 5L (75min) (rev 4)

Batch Size : 5.6 L  
 Boil Size : 8.21 L  
 Post-Boil Vol : 5.96 L

Mash Water : 5.25 L  
 Sparge Water : 4.76 L

Boil Time : 75 min  
 Total Water : 10.01 L

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%



79 EBC

### Mash Profile

High fermentability  
 71 °C - Strike Temp  
 65 °C - 90 min - Temperature

### Fermentation Profile

Ale  
 18 °C (2 day ramp) - 2 days - Primary  
 21 °C - 12 days - Primary

### Water Profile

NL Hoofddorp Rein Tap Water (2020-Q3 WQR) (St...  
 Ca 58 Mg 15 Na 68 Cl 100 SO 100

SO/Cl ratio: 1  
 Mash pH: 5.41  
 Sparge pH: 6

### Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume: