

## Extra Stout - 4.5%

### Irish Stout

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Type: All Grain

IBU : 32 (Tinseth)  
 BU/GU : 0.69  
 Colour : 44 EBC  
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.036  
 Original Gravity : 1.047  
 Final Gravity : 1.013

### Fermentables (1.26 kg)

1.113 kg - Finest Pale Ale Golden Promise 5.5...  
 ^ The Malt Miller (UK) MAL-00-058  
 41 g - Brown Malt 135 EBC (3.3%)  
 41 g - 30 min - Steep - Chocolate Malt 950 EB...  
 ^ The Malt Miller (UK) MAL-02-004  
 21 g - Dark Crystal Malt 240 EBC (1.7%)  
 ^ The Malt Miller (UK) MAL-01-002  
 21 g - Medium Crystal 240 265 EBC (1.7%)  
 21 g - 30 min - Steep - Roasted Barley 1300 E...  
 ^ The Malt Miller (UK) MAL-02-007

### Hops (13.9 g)

60 min - 13.9 g - Willamette (Whole) - 5% (32...  
 ^ Lot # 20220911  
 ^ Home grown by The Thirsty Otter

### Miscellaneous

Mash - 0.42 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 5.93 g - Calcium Chloride (CaCl2) 33 %...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 1.93 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 0.73 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 1.04 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004

### Yeast

0.4 pkg - White Labs Irish Ale Yeast WLP004

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

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

Mash Water : 3.59 L  
 Sparge Water : 5.44 L  
 Boil Time : 60 min  
 Total Water : 9.03 L



44 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

01 One Step Mash (60 min)  
 71 °C - Strike Temp  
 65 °C - 60 min - Temperature

### Fermentation Profile

01 Ale + DR + Conditioning  
 18 °C - 10 days - Primary  
 20 °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...  
 Ca 110 Mg 10 Na 100 Cl 273 SO 100 HCO 50

SO/Cl ratio: 0.4  
 Mash pH: 5.29  
 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

Target: ABV = 4.6 %, IBU = 32, OG = 1.047, FG = 1.011.