

## Brouwerij De Ranke - XX Bitter (clone) v2 - 6%

### Belgian IPA

Author: The Thirsty Otter

Type: All Grain

IBU : 64 (Tinseth)  
 BU/GU : 1  
 Colour : 27 EBC  
 Carbonation : 2.5 CO2-vol

Pre-Boil Gravity : 1.043  
 Original Gravity : 1.064  
 Final Gravity : 1.018

### Fermentables (1.56 kg)

1.4 kg - Pils 3.5 EBC (89.6%)  
 ^ Brouwmaatje (NL) 051.002.4  
 130 g - Candy Syrup Dark 220 EBC (8.3%)  
 32 g - Sugar, Table (Sucrose) 2 EBC (2.1%)  
 ^ Albert Heijn (NL)

### Hops (51 g)

60 min - 11 g - Brewer's Gold (T90) - 5.2% (2...  
 ^ The Malt Miller (UK) HOP-06-011  
 30 min - 15 g - Hallertauer Mittelfrueh (T90)...  
 ^ The Malt Miller (UK) HOP-06-008  
 10 min - 15 g - Hallertauer Mittelfrueh (T90)...  
 ^ The Malt Miller (UK) HOP-06-008

### Hop Stand

10 min hopstand @ 80 °C  
 10 min - 10 g - Hallertauer Mittelfrueh (T90)...

### Miscellaneous

Mash - 0.65 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 1.19 g - Calcium Chloride (CaCl2) 33 %...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.65 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 1.22 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 2.39 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 0.9 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 Mash - 3.3 l - NL Spa Reine Flat Mineral Water  
 ^ AH (NL)  
 Sparge - 5.64 l - NL Spa Reine Flat Mineral W...  
 ^ AH (NL)  
 60 min - Boil - 0.15 g - Lipohop K  
 ^ Lot # LPK110  
 ^ The Malt Miller (UK) CH-03-013  
 10 min - Boil - 1 g - Irish Moss  
 ^ Lot # 4348  
 ^ Brouwstore (NL) 125.249.1  
 10 min - Boil - 0.05 g - Lallemand Servomyces  
 ^ Lot # 154001112904ABV  
 ^ Brouwstore (NL) 050.620.4  
 10 min - Boil - 1 items - Wort Chiller  
 ^ Brouwstore (NL) 057.020.20

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

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

Mash Water : 4.2 L  
 Sparge Water : 5.02 L  
 Boil Time : 60 min  
 Total Water : 9.22 L



27 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

High fermentability plus mash out  
 71 °C - Strike Temp  
 65 °C - 60 min - Temperature  
 75 °C - 10 min - Mash Out

### Fermentation Profile

Ale + DR + Conditioning  
 16 °C - 2 days - Primary  
 19 °C (3 day ramp) - 12 days - Diacetyl rest  
 15 °C - 28 days - Conditioning

### Water Profile

NL Spa Reine Flat Mineral Water (www.ah.nl) (...  
 Ca 81 Mg 15 Na 50 Cl 75 SO 200

SO/Cl ratio: 2.7

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:

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## Recipe Notes

Target: ABV = 6.0 %, IBU = 65.

Original recipe @ [brewersfriend.com/homebrew/recipe/view/242694/de-ranke-xx-bitter-clone](https://brewersfriend.com/homebrew/recipe/view/242694/de-ranke-xx-bitter-clone)

I tweaked the hop bill for range and target.

Fermentis yeast according to brewery information, most likely T-58 as BE-256 wasn't available at the time the brewery went from Rodenbach yeast to Fermentis dry yeast.

Low fermentation temperatures to avoid estery flavours.

No dry hopping.

Conditioning for 4 weeks @ 15 C.