

## Christmas Tree Bitter - 3.8%

Best Bitter

Author: [GMB Homebrewinguk.com](https://homebrewinguk.com)

Type: All Grain

IBU : 31 (Tinseth)  
BU/GU : 0.74  
Colour : 32 EBC  
Carbonation : 1.6 CO<sub>2</sub>-vol

Pre-Boil Gravity : 1.032  
Original Gravity : 1.041  
Final Gravity : 1.012

Fermentables (1.1 kg)

963 g - Pale Malt 2-Row 5.9 EBC (87.6%)  
53 g - Chateau Biscuit 45 EBC (4.8%)  
^ Lot # 5425000394839 (24.11.2022)  
^ Brouwerij Maatje (NL) BM BL 051.098.2/1  
40 g - Red Crystal Malt 400 EBC (3.6%)  
27 g - 30 min - Steep - Chocolate Malt 950 EBC...  
^ The Malt Miller (UK) MAL-02-004  
16 g - Extra Light Crystal Malt 100 EBC (1.5%)  
^ The Malt Miller (UK) MAL-01-031

Hops (26 g)

60 min - 4.7 g - East Kent Goldings - 5.4% (1...  
^ Hopeye (GB) HE-50G-HOPS-EASTKENTGOLDINGS (5...  
30 min - 4 g - East Kent Goldings - 5.4% (9 IBU)  
^ Hopeye (GB) HE-50G-HOPS-EASTKENTGOLDINGS (5...  
10 min - 4 g - East Kent Goldings - 5.4% (5 IBU)  
^ Hopeye (GB) HE-50G-HOPS-EASTKENTGOLDINGS (5...

Hop Stand

30 min hopstand @ 75 °C  
30 min 75 °C - 13.3 g - East Kent Goldings -...  
^ Hopeye (GB) HE-50G-HOPS-EASTKENTGOLDINGS (5...

Miscellaneous

Mash - 0.63 g - Baking Soda (NaHCO<sub>3</sub>)  
^ Lot # 41190621/3  
^ Brouwstore (NL) 003.106.2  
Mash - 1.15 g - Calcium Chloride (CaCl<sub>2</sub>) 33 %...  
^ Lot # 115038  
^ Brouwstore (NL) 055.035.0  
Mash - 0.63 g - Canning Salt (NaCl)  
^ Albert Heijn (NL)  
Mash - 1.17 g - Epsom Salt (MgSO<sub>4</sub>)  
^ Lot # /2119000091  
^ Brouwstore (NL) 055.027.7  
Mash - 1.52 g - Gypsum (CaSO<sub>4</sub>)  
^ The Malt Miller (UK) CHE-03-004  
Mash - 0.2 ml - Lactic Acid 80% 80%  
^ Lot # 20200213  
^ Brouwstore (NL) 003.002.3

Yeast

0.3 pkg - CrossMyLoof Four

01 Brouwput 5L (60min) (rev 4)

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

Mash Water : 3.22 L  
Sparge Water : 5.69 L  
Boil Time : 60 min  
Total Water : 8.91 L

32 EBC

Brewhouse Efficiency: 71.8%

Mash Efficiency: 73.3%

Mash Profile

01 One Step Mash (60 min)  
73.3 °C - Strike Temp  
67 °C - 60 min - Temperature  
76 °C - 15 min - Sparge

Fermentation Profile

01 Ale + DR + Conditioning  
18 °C - 10 days - Primary  
21 °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](http://www.ah.nl)...  
Ca 60 Mg 15 Na 50 Cl 75 SO 150 HCO 67

SO/Cl ratio: 2

Mash pH 5.39

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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[www.brewfather.app](https://web.brewfather.app)

## Recipe Notes

Target: ABV = 4.52 % | IBU = 29.48, EBC = 27.74, OG = 1.046, FG = 1.012, Mash pH = 5.26