

Northern Star™ // Chocolate, Caramel & Biscuit Porter - 5.1%

American Porter 01 Brouwpunt 5L (90min) (rev 4) Author: Northern Monk Brewing Co. Batch Size : 5.6 L Boil Size : 8.66 L Post-Boil Vol : 5.96 L Type: All Grain IBU : 21 (Tinseth) Mash Water : 4.22 L BU/GU : 0.33 Sparge Water : 5.91 L 92 EBC Colour : 92 EBC Boil Time : 90 min : 2.4 CO2-vol Carbonation Total Water : 10.13 L : 1.038 Pre-Boil Gravity Brewhouse Efficiency: 71.8% Original Gravity : 1.063 Mash Efficiency: 73.3% Final Gravity : 1.024 Mash Profile Fermentables (1.77 kg) 01 One Step Mash (90 min) 1.14 kg - Pale Malt 2-Row 5.9 EBC (64.5%) 73.3 °C - Strike Temp 171 g - 10 min - Boil - Milk Sugar (Lactose)... 67 °C - 90 min - Temperature 166 g - Naked Oat Malt 5 EBC (9.4%) 75.6 °C - 10 min - Mash out 95 g - 30 min - Steep - Chocolate Malt 950 EB... 95 g - 30 min - Steep - Roasted Barley 1300 E... Fermentation Profile ^ The Malt Miller (UK) MAL-02-007 01 Ale + DR + Conditioning 18 °C - 10 days - Primary 50 g - Caramel/Crystal Malt 150 EBC (2.8%) 21 °C - 4 days - Diacetyl rest 50 g - Dark Crystal Malt 240 EBC (2.8%) 18 °C - 14 days - Carbonation ^ The Malt Miller (UK) MAL-01-002 18 °C - 28 days - Conditioning Hops (15.3 g) Water Profile 90 min - 3.3 g - Magnum - 11% (19 IBU) ^ Lot # 694-201130-111430-176081-HOP06-009-RG... 02 NL Spa Reine Flat Mineral Water (www.ah.nl... Ca 58 Mg 12 Na 50 Cl 100 SO 100 HCO 68 Hop Stand 15 min hopstand @ 80 °C SO/Cl ratio: 1 15 min - 12 g - Saaz - 3% (2 IBU) Mash pH: 5.4 ^ Lot # T9020044SAA Sparge pH: 6 Miscellaneous Measurements Mash - 0.72 g - Baking Soda (NaHCO3) ^ Lot # 41190621/3 Mash pH: ^ Brouwstore (NL) 003.106.2 Mash - 2.52 g - Calcium Chloride (CaCl2) 33 %... Boil Volume: ^ Lot # 115038 ^ Brouwstore (NL) 055.035.0 Pre-Boil Gravity: Mash - 0.71 g - Canning Salt (NaCl) ^ Albert Heijn (NL) Post-Boil Kettle Volume: Mash - 1.02 g - Epsom Salt (MgSO4) ^ Lot # /2119000091 Original Gravity: ^ Brouwstore (NL) 055.027.7 Mash - 1.03 g - Gypsum (CaSO4) Fermenter Top-Up: ^ The Malt Miller (UK) CHE-03-004 Mash - 0.5 ml - Lactic Acid 80% 80% Fermenter Volume: ^ Lot # 20200213 ^ Brouwstore (NL) 003.002.3 Final Gravity:

Bottling Volume:

Yeast

0.6 pkg - Fermentis SafAle English Ale S-04

Secondary - 20 g - Beanies double chocolate c...

^ Lot # 66485 1315 245

^ Brouwmaatje (NL) BM-BL.050.005.8

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Recipe Notes

Target: IBU = 19.8, EBC = 95.6, OG = 1.070.

Coffee in secondary for 1 day.