

Randy Mosher - Munich Dunkel - 5.3%

Munich Dunkel

Author: Randy Mosher

Type: All Grain

IBU : 23 (Tinseth)
 BU/GU : 0.44
 Colour : 34 EBC
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.036
 Original Gravity : 1.052
 Final Gravity : 1.012

Fermentables (1.31 kg)

1.271 kg - Munich Malt 15 EBC (97.4%)
 ^ Brouwmaatje (NL) 051.043.8/1
 34 g - Carafa II 820 EBC (2.6%)

Hops (9.4 g)

90 min - 9.4 g - Hallertau - 4.5% (23 IBU)

Miscellaneous

Mash - 0.72 g - Baking Soda (NaHCO3)
 ^ Lot # 41190621/3
 ^ Brouwstore (NL) 003.106.2
 Mash - 2.51 g - Calcium Chloride (CaCl2) 33 %...
 ^ Lot # 115038
 ^ Brouwstore (NL) 055.035.0
 Mash - 0.7 g - Canning Salt (NaCl)
 ^ Albert Heijn (NL)
 Mash - 0.23 g - Epsom Salt (MgSO4)
 ^ Lot # /2119000091
 ^ Brouwstore (NL) 055.027.7
 Mash - 0.22 g - Gypsum (CaSO4)
 ^ The Malt Miller (UK) CHE-03-004
 Mash - 0.6 ml - Lactic Acid 80% 80%
 ^ Lot # 20200213
 ^ Brouwstore (NL) 003.002.3

01 Brouwpunt 5L (90min) (rev 4)

Batch Size : 5.6 L
 Boil Size : 8.66 L
 Post-Boil Vol : 5.96 L

Mash Water : 3.92 L
 Sparge Water : 6.11 L
 Boil Time : 90 min
 Total Water : 10.03 L



34 EBC

Brewhouse Efficiency: 71.8%
 Mash Efficiency: 73.3%

Mash Profile

01 One Step Mash (60 min)
 68.7 °C - Strike Temp
 63 °C - 60 min - Temperature

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...
 Ca 40 Mg 4 Na 50 Cl 100 SO 25

SO/Cl ratio: 0.3
 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:

Recipe Notes

Target: ABV = 4.4 %, IBU = 26, OG = 1.048.