

Short & Shoddy | Munich Helles (4A) - 5.1%

Munich Helles

Author: Will Lovell

Type: All Grain

IBU : 16 (Tinseth)
BU/GU : 0.31
Colour : 9 EBC
Carbonation : 2.5 CO2-vol

Pre-Boil Gravity : 1.045
Original Gravity : 1.052
Final Gravity : 1.013

Fermentables (1.31 kg)

917 g - Pilsner 3.3 EBC (70.1%)
290 g - Llano Pilsner 3.5 EBC (22.2%)
84 g - Munich Malt 16.7 EBC (6.4%)
18 g - Melanoidin 59 EBC (1.4%)

Hops (20.1 g)

30 min - 11.5 g - Spalt Select - 2.6% (11 IBU)
15 min - 4 g - Hallertau Mittelfruh - 5.2% (5...
5 min - 4.6 g - Tettnang - 2.2% (1 IBU)

Miscellaneous

Mash - 0.24 g - Baking Soda (NaHCO3)
^ Lot # 41190621/3
^ Brouwstore (NL) 003.106.2
Mash - 2.27 g - Calcium Chloride (CaCl2) 33 %...
^ Lot # 115038
^ Brouwstore (NL) 055.035.0
Mash - 0.23 g - Canning Salt (NaCl)
^ Albert Heijn (NL)
Mash - 0.4 g - Epsom Salt (MgSO4)
^ Lot # /2119000091
^ Brouwstore (NL) 055.027.7
Mash - 0.4 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

Yeast

0.6 pkg - Imperial Yeast Global L13

01 Brouwpunt 5L (30min) (rev 4)

Batch Size : 5.6 L
Boil Size : 6.86 L
Post-Boil Vol : 5.96 L

Mash Water : 3.93 L
Sparge Water : 4.31 L
Boil Time : 30 min
Total Water : 8.24 L



9 EBC

Brewhouse Efficiency: 71.8%
Mash Efficiency: 73.3%

Mash Profile

Medium fermentability
73.3 °C - Strike Temp
67 °C - 45 min - Temperature

Fermentation Profile

Ale (copy)
20 °C - 7 days - Primary

Water Profile

02 NL Spa Reine Flat Mineral Water (www.ah.nl...
Ca 49 Mg 7 Na 22 Cl 80 SO 50 HCO 38

SO/Cl ratio: 0.6

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: