Brewfather
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AnOtter Hefeweissbier - 5.1%

Weissbier
Author: The Thirsty Otter

Type: All Grain

IBU	: 13 (Tinseth)
BU/GU	: 0.26
Colour	: 7 EBC
Carbonation	: 3.9 CO2-vol
Pre-Boil Gravity	: 1.032
Original Gravity	: 1.046
Total Gravity	: 1.051
Final Gravity	: 1.012

Fermentables (1.14 kg)
670 g - Wheat Malt Light 4 EBC (58.8%)
^ The Malt Miller (UK)
370 g - Premiere Pilsner Malt 4 EBC (32.5%)
^ The Malt Miller (UK) MAL-00-033
100 g - TMM Rolled Wheat Flakes 3 EBC (8.8%)
^ The Malt Miller (UK) MAL-03-013
58 g - Bottling - Sugar, Table (Sucrose) 2 EBC

Hops (7 g)
30 min - 3 g - Hallertau Perle (Whole) - 7% (...
^ Brouwstore (NL)
15 min - 4 g - Hallertau Perle (Whole) - 7% (...
^ Brouwstore (NL)

Miscellaneous
Mash - 3.42 l - NL Spa Reine Flat Mineral Water
^ AH (NL)
Mash - 0.32 g - Baking Soda (NaHCO3)
^ Lot # 41190621/3
^ Brouwstore (NL) 003.106.2
Mash - 0.55 g - Calcium Chloride (CaCl2) 33 %...
^ Lot # 115038
^ Brouwstore (NL) 055.035.0
Mash - 0.54 g - Canning Salt (NaCl)
^ Albert Heijn (NL)
Mash - 0.22 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 - 1.6 ml - Lactic Acid 80% 80%
^ Lot # 20200213
^ Brouwstore (NL) 003.002.3
Mash - 2 items - pH paper strips 5.2 - 6.8
^ Lot # 20200422/1
^ Brouwstore (NL) 013.075.7
Sparge - 6.45 l - NL Spa Reine Flat Mineral W...
^ AH (NL)
60 min - Boil - 0.18 g - Lipohop K
^ Lot # LPK110
^ The Malt Miller (UK) CH-03-013
10 min - Boil - 0.06 g - Lallemand Servomyces
^ Lot # 154001112904ABV
^ Brouwstore (NL) 050.620.4
10 min - Boil - 1 items - Wort Chiller
^ Brouwstore (NL) 057.020.20
Bottling - 10 items - 50 cl NRW bottle (26 mm...
^ Nordrhein-Westfalen

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

Batch Size	: 5.6 L
Boil Size	: 8.66 L
Post-Boil Vol	: 5.96 L
Mash Water	: 3.42 L
Sparge Water	: 6.45 L
Boil Time	: 90 min
Total Water	: 9.87 L


7 EBC

Brewhouse Efficiency: 71.8%
Mash Efficiency: 73.3%

Mash Profile
07 Hefeweizen (60 min)
48.3 °C - Strike Temp
45 °C - 10 min - Ferulic Acid Rest
50 °C - 15 min - Protein Rest
65 °C - 35 min - Saccharification

Fermentation Profile
01 Ale + DR + Conditioning
18 °C - 10 days - Primary
21 °C - 4 days - Diacetyl rest
18 °C - 45 days - Conditioning

Water Profile
NL Spa Reine Flat Mineral Water (www.ah.nl) (...
Ca 17 Mg 4 Na 33 Cl 50 SO 25 HCO 40

SO/Cl ratio: 0.5
Mash pH: 5.47
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:

AnOtter Hefeweissbier

Recipe Notes

Target: ABV = 5.0 %, IBU = 15.

Start Ferulic acid rest with a pH = 5.7-5.8.
Add brewing salts just before Saccharification rest.

Maltase converts maltose into glucose. It is therefore an important enzyme for the yeast. But it is also present in malt. But since its temperature optimum is between 95ºF (35ºC) and 104ºF (40ºC) [Narziss, 2005] and it is being deactivated above 115ºF (45ºC), this enzyme does not play any significant role in most mashing schedules since higher temperature rests are necessary to generate glucose for this enzyme.

It is however used in a mashing schedule developed by Markus Hermann from the Weihenstephan brewing school in Germany. This mash converts half the mash to get a large amount of glucose. After that conversion is complete, it is mixed with the remaining mash to achieve a rest temperature of 95ºF (35ºF) where the maltase converts the now existing maltose to glucose. After that the whole mash is again run through a regular mashing schedule to convert the remaining starch to maltose and dextrins. The result is a wort with a very high glucose content (about 40% of the fermentable sugars). Yeast fermenting such a wort will generate more esters, a property that can be used to produce German wheat beers with a high ester content.

Pitch yeast @ 15 C.