

## 61 Three Hops Blonde - 4.7%

### Blonde Ale

Brewer: The Thirsty Otter

Type: All Grain

IBU : 23 (Tinseth)  
 BU/GU : 0.49  
 Colour : 9 EBC  
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.034  
 Original Gravity : 1.047  
 Final Gravity : 1.011

### Fermentables (1.13 kg)

1.1 kg - Maris Otter Pale Ale Malt 5.9 EBC (9...  
 ^ Lot # 694-201130-111430-176081-1/1  
 ^ The Malt Miller (UK) MAL-00-036  
 30 g - Sugar, Table (Sucrose) 2 EBC (2.7%)  
 ^ Albert Heijn (NL)

### Hops (38.3 g)

30 min - 3 g - Magnum - 10.7% (13 IBU)  
 ^ Lot # 694-201130-111430-176081-HOP06-009-RG...  
 ^ The Malt Miller (UK) HOP-06-009  
 10 min - 3 g - Magnum - 10.7% (7 IBU)  
 ^ Lot # 694-201130-111430-176081-HOP06-009-RG...  
 ^ The Malt Miller (UK) HOP-06-009

### Hop Stand

15 min hopstand @ 80 °C  
 15 min - 4 g - Magnum - 10.7% (3 IBU)

### Dry Hops

7 days - 14.3 g - Centennial - 9%  
 7 days - 14 g - Citra - 13.8%

### Miscellaneous

Mash - 5.7 l - NL Spa Reine Flat Mineral Water  
 ^ Lot # 20210411  
 ^ AH (NL)  
 Mash - 3.3 l - NL Spa Reine Flat Mineral Water  
 ^ Lot # 20210411  
 ^ AH (NL)  
 Mash - 0.28 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 0.78 ml - Calcium Chloride (CaCl2) 33...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.75 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 1.18 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 1.52 g - Gypsum (CaSO4)  
 ^ Brouwmaatje (NL)  
 Mash - 0.5 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 60 min - Boil - 0.27 g - Lipohop K  
 ^ Lot # LPK110  
 ^ The Malt Miller (UK) CH-03-013  
 10 min - Boil - 1 g - Irish Moss  
 ^ Lot # 4348

### 01 Brouwpunt 5L (60min) (rev 4)

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

Mash Water : 3.3 L  
 Sparge Water : 5.64 L  
 Boil Time : 60 min  
 Total Water : 8.94 L



9 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

04 High fermentability (60 min)  
 68.7 °C - Strike Temp  
 63 °C - 60 min - Temperature

### Fermentation Profile

01 Ale + DR + Conditioning  
 17 °C - 10 days - Primary  
 19 °C - 4 days - Diacetyl rest  
 17 °C - 14 days - Carbonation  
 15 °C - 28 days - Conditioning

### Water Profile

NL Spa Reine Flat Mineral Water (www.ah.nl) (...  
 Ca 55 Mg 15 Na 45 Cl 75 SO 150

SO/Cl ratio: 2

Mash pH: 5.38

Sparge pH: 6

### Measurements

Mash pH: 5.5

Boil Volume: 8.5

Pre-Boil Gravity: 1.035

Post-Boil Kettle Volume: 6.8

Original Gravity: 1.038

Fermenter Top-Up:

Fermenter Volume: 5.6

Final Gravity: 1.038

Bottling Volume:

# Batch #10 - 2 May 2021

## Recipe Notes

Malt is ordered with standard crush @ The Malt Miller (<https://www.themaltmiller.co.uk/>).  
Pitch slurry from Batch #8 @ 20 C.

## Batch Notes

02-05-2021 08:47 Brewday  
3.3 L Spa Reine Natural Mineral water  
0.28 grams Baking Soda (NaCO3)  
0.78 mL Calciumchloride  
0.75 grams Canning salt  
1.18 grams Epsom salt  
1.52 grams Gypsum  
0.5 mL Lactic acid  
02-05-2021 09:22 Mash in @ 68.7 C  
02-05-2021 09:35 Mash pH = 5.5 @ 64.0 C.  
02-05-2021 10:22 End of mash  
02-05-2021 10:32 Sparged with 1.2 L @ 68.0 C.  
02-05-2021 10:45 Sparged with 1.5 L @ 67.9 C.  
02-05-2021 11:00 Sparged with 1.5 L @ 67.6 C.  
02-05-2021 11:14 Sparged with 1.5 L @ 68.9 C.  
02-05-2021 11:35 SG = 1.026 @ 46.6 C --> SG = 1.035 @ 20 C.  
02-05-2021 11:38 Level = 17.0 cm --> 8.5 L wort collected.  
02-05-2021 11:45 0.27 grams Lipohop K  
02-05-2021 12:13 Start of boil.  
02-05-2021 12:43 added 3 grams Magnum hops.  
02-05-2021 13:03 added 3 grams Magnum hops.  
02-05-2021 13:03 Added 1 grams Irish Moss.  
02-05-2021 13:03 Added 0.05 grams Servomyces yeast nutrient.  
02-05-2021 13:03 Added wort chiller.  
02-05-2021 13:13 Flame out.  
02-05-2021 13:38 Start of hopstand @ 80.0 C, added 4 grams Magnum hops.  
02-05-2021 13:48 End of hopstand @ 73.0 C.  
02-05-2021 14:45 SG = 1.038 @ 23 C --> SG = 1.038 @ 20 C.  
02-05-2021 14:50 Collected 5.6 L wort in the fermenter bucket.

### Day 0 in fermentation

02-05-2021 16:54 Pitched 5 grams S-04 yeast @ 17.4 C.  
02-05-2021 22:46 16.0 C, dp = 0 mm H2O, no bubbles.

### Day 1 in fermentation

03-05-2021 09:04 16.9 C, dp = 50 mm H2O, no bubbles.  
03-05-2021 11:07 16.4 C, dp = 50 mm H2O, no bubbles.  
03-05-2021 15:55 17.0 C, dp = 50 mm H2O, few bubbles.  
03-05-2021 18:04 16.7 C, dp = 50 mm H2O, many bubbles.  
03-05-2021 20:38 16.2 C, dp = 50 mm H2O, few bubbles.  
03-05-2021 23:48 16.1 C, dp = 50 mm H2O, many bubbles.

### Day 2 in fermentation

04-05-2021 07:51 16.4 C, dp = 50 mm H2O, many bubbles.  
04-05-2021 13:14 17.0 C, dp = 50 mm H2O, many bubbles.  
04-05-2021 18:58 16.5 C, dp = 50 mm H2O, many bubbles.  
04-05-2021 23:10 16.3 C, dp = 50 mm H2O, many bubbles.

### Day 3 in fermentation

05-05-2021 08:29 17.0 C, dp = 50 mm H2O, many bubbles.  
05-05-2021 13:27 17.0 C, dp = 50 mm H2O, many bubbles.  
05-05-2021 19:16 17.0 C, dp = 50 mm H2O, many bubbles.  
05-05-2021 23:23 16.0 C, dp = 50 mm H2O, few bubbles.

### Day 4 in fermentation

06-05-2021 10:39 16.8 C, dp = 50 mm H2O, few bubbles.  
06-05-2021 15:11 17.0 C, dp = 50 mm H2O, few bubbles.  
06-05-2021 23:14 16.4 C, dp = 50 mm H2O, few bubbles.

### Day 5 in fermentation

# Batch #10 - 2 May 2021

## Batch Notes

07-05-2021 08:14 16.4 C, dp = 50 mm H2O, few bubbles.  
 07-05-2021 12:52 16.5 C, dp = 50 mm H2O, few bubbles.  
 07-05-2021 19:37 16.4 C, dp = 50 mm H2O, few bubbles.  
 07-05-2021 23:22 17.0 C, dp = 50 mm H2O, few bubbles.

### Day 6 in fermentation

08-05-2021 09:32 16.7 C, dp = 50 mm H2O, few bubbles.  
 08-05-2021 14:53 16.5 C, dp = 50 mm H2O, no bubbles.  
 08-05-2021 19:47 16.6 C, dp = 50 mm H2O, few bubbles.  
 08-05-2021 23:33 17.0 C, dp = 50 mm H2O, few bubbles.

### Day 7 in fermentation

09-05-2021 10:29 16.1 C, dp = 40 mm H2O, no bubbles.  
 09-05-2021 14:26 17.0 C, dp = 45 mm H2O, no bubbles.  
 09-05-2021 14:27 Added 14 grams Citra and 14.27 grams Centennial hops to the fermenter.  
 09-05-2021 16:50 16.8 C, dp = 45 mm H2O, no bubbles.  
 09-05-2021 23:23 16.8 C, dp = 35 mm H2O, no bubbles.

### Day 8 in fermentation

10-05-2021 10:31 16.4 C, dp = 30 mm H2O, no bubbles.

### Day 9 in fermentation

11-05-2021 09:20 16.1 C, dp = 20 mm H2O, no bubbles.  
 11-05-2021 13:17 16.9 C, dp = 30 mm H2O, no bubbles.  
 11-05-2021 20:35 16.5 C, dp = 30 mm H2O, no bubbles.  
 11-05-2021 23:10 16.3 C, dp = 30 mm H2O, no bubbles.

### Day 10 in fermentation

12-05-2021 09:14 16.1 C, dp = 15 mm H2O, no bubbles.  
 12-05-2021 09:51 SV = 17.3 C.  
 12-05-2021 14:03 16.9 C, dp = 20 mm H2O, no bubbles.

## Extra Measured Values

Strike Temperature	68.7
Strike Water pH	5.5
Sparge Water Temperature	68.1
Sparge Water pH	6
Pitch Temperature	17.4

## Batch Log

2 May 2021	Brew Date
2 May 2021	Fermentation Start
2 May 2021 08:47	Status: Brewing
2 May 2021 16:54	Status: Fermenting, SV = 17.0 C.
9 May 2021 14:27	Added 14 grams Citra and 14.27 grams Centennial hops to the fermenter
12 May 2021 09:51	SV = 17.3 C.
12 May 2021 14:17	SV = 17.7 C
16 May 2021	Bottling Date