

## 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)  
 ^ Lot # 694-201130-111430-176081-HOP06-009-RG...  
 ^ The Malt Miller (UK) HOP-06-009

### Dry Hops

7 days - 14.3 g - Centennial - 9%  
 ^ Worcester Hop Shop (UK)  
 7 days - 14 g - Citra - 13.8%  
 ^ Worcester Hop Shop (UK)

### Miscellaneous

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  
 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)  
 60 min - Boil - 0.27 g - Lipohop K

### 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  
 17 °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: 1.000

Bottling Volume: 4.62

# 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.  
 12-05-2021 14:17 SV = 17.7 C.  
 12-05-2021 17:06 SV = 18.0 C.  
 12-05-2021 18:31 18.0 C, dp = 1 mm H2O, no bubbles.  
 12-05-2021 18:31 SV = 18.3 C.  
 12-05-2021 20:23 SV = 18.7 C.  
 12-05-2021 22:12 SV = 19.0 C.  
 12-05-2021 22:22 18.7 C, dp = 30 mm H2O, no bubbles.  
 12-05-2021 23:58 SV = 19.5 C.

### Day 11 in fermentation

13-05-2021 09:34 19.4 C, dp = 49 mm H2O, no bubbles.  
 13-05-2021 13:41 18.6 C, dp = 20 mm H2O, no bubbles.  
 13-05-2021 18:50 19.2 C, dp = 12 mm H2O, no bubbles.  
 13-05-2021 22:35 18.7 C, dp = 8 mm H2O, no bubbles.

### Day 12 in fermentation

14-05-2021 10:38 19.5 C, dp = 40 mm H2O, no bubbles.  
 14-05-2021 13:23 18.7 C, dp = 11 mm H2O, no bubbles.  
 14-05-2021 20:12 18.5 C, dp = 11 mm H2O, no bubbles.  
 14-05-2021 23:55 19.0 C, dp = 11 mm H2O, no bubbles.

### Day 13 in fermentation

15-05-2021 10:10 18.6 C, dp = 10 mm H2O, no bubbles.  
 15-05-2021 14:16 18.6 C, dp = 10 mm H2O, no bubbles.  
 15-05-2021 19:11 19.0 C, dp = 10 mm H2O, no bubbles.  
 15-05-2021 23:05 19.2 C, dp = 10 mm H2O, no bubbles.

### Day 14 in fermentation

16-05-2021 12:03 19.2 C, dp = 35 mm H2O, no bubbles.

### Bottling day

16-05-2021 17:10 19.5 C, SG = 1.000.  
 16-05-2021 17:25 filled 14 Steinie bottles (33 cl).

### Day 0 in conditioning

# Batch #10 - 2 May 2021

## Batch Notes

16-05-2021 17:51 SV = 17.0 C.  
16-05-2021 22:39 16.0 C.

### Day 1 in conditioning

17-05-2021 08:02 15.9 C.  
17-05-2021 13:23 17.1 C.  
17-05-2021 20:11 16.0 C.  
17-05-2021 23:25 17.1 C.

### Day 2 in fermentation

18-05-2021 07:43 16.5 C.  
18-05-2021 15:30 16.2 C.  
18-05-2021 21:45 17.1 C.

### Day 3 in fermentation

19-05-2021 09:59 17.1 C.  
19-05-2021 12:52 16.8 C.  
19-05-2021 20:31 17.1 C.

### Day 4 in conditioning

20-05-2021 10:53 16.8 C.  
20-05-2021 14:33 16.1 C.  
20-05-2021 18:26 17.1 C.

### Day 5 in conditioning

21-05-2021 07:42 17.0 C.  
21-05-2021 12:41 16.6 C.  
21-05-2021 17:56 16.9 C.  
21-05-2021 23:51 16.9 C.

### Day 6 in conditioning

22-05-2021 11:02 16.9 C.  
22-05-2021 14:24 16.1 C.  
22-05-2021 23:03 16.4 C.

### Day 7 in conditioning

23-05-2021 09:30 16.0 C.  
23-05-2021 18:38 16.3 C.  
23-05-2021 23:39 17.1 C.

### Day 8 in conditioning

24-05-2021 08:52 16.6 C.  
24-05-2021 15:37 16.3 C.  
24-05-2021 23:45 17.1 C.

### Day 9 in conditioning

25-05-2021 10:10 16.9 C.  
25-05-2021 13:53 16.1 C.  
25-05-2021 23:53 16.3 C.

### Day 10 in conditioning

26-05-2021 08:58 16.2 C.  
26-05-2021 14:56 17.1 C.  
26-05-2021 23:04 16.6 C.

### Day 11 in conditioning

27-05-2021 08:42 16.3 C.  
27-05-2021 12:45 17.0 C.  
27-05-2021 21:31 17.1 C.

### Day 12 in conditioning

28-05-2021 08:53 16.7 C.  
28-05-2021 18:30 17.1 C.  
28-05-2021 22:11 16.8 C.

### Day 13 in conditioning

# Batch #10 - 2 May 2021

## Batch Notes

29-05-2021 09:41 17.1 C.  
29-05-2021 15:46 16.2 C.  
29-05-2021 22:03 16.3 C.

Day 14 in conditioning  
30-05-2021 09:26 16.0 C.  
30-05-2021 16:35 17.2 C.  
30-05-2021 22:48 17.2 C.

Day 15 in conditioning  
31-05-2021 08:39 16.2 C.  
31-05-2021 16:13 17.3 C.  
31-05-2021 23:21 15.8 C.

Day 16 in conditioning  
01-06-2021 07:51 16.2 C.  
01-06-2021 17:57 16.5 C.  
01-06-2021 23:09 15.9 C.

Day 17 in conditioning  
02-06-2021 07:47 15.7 C.  
02-06-2021 13:08 16.0 C.  
02-06-2021 21:53 15.9 C.

Day 18 in conditioning  
03-06-2021 08:34 16.4 C.  
03-06-2021 14:04 15.6 C.  
03-06-2021 20:05 16.8 C.

Day 19 in conditioning  
04-06-2021 08:50 16.6 C.  
04-06-2021 17:20 15.9 C.  
04-06-2021 23:42 17.0 C.

Day 20 in conditioning  
05-06-2021 09:27 15.8 C.  
05-06-2021 15:35 16.1 C.  
05-06-2021 22:52 16.4 C.

Day 21 in conditioning  
06-06-2021 09:55 16.4 C.  
06-06-2021 13:00 moved bottles to the cellar.  
06-06-2021 19:32 18.1 C.  
06-06-2021 23:04 18.8 C.

Day 22 in conditioning  
07-06-2021 08:41 18.1 C.  
07-06-2021 15:20 18.0 C.  
07-06-2021 22:29 18.4 C.

Day 23 in conditioning  
08-06-2021 07:22 18.7 C.  
08-06-2021 13:57 18.7 C.  
08-06-2021 23:47 18.4 C.

Day 24 in conditioning  
09-06-2021 08:57 18.9 C.  
09-06-2021 14:47 18.2 C.  
09-06-2021 23:50 18.7 C.

Day 25 in conditioning  
10-06-2021 09:19 19.2 C.  
10-06-2021 20:02 19.8 C.  
10-06-2021 23:32 19.8 C.

Day 26 in conditioning

# Batch #10 - 2 May 2021

## Batch Notes

11-06-2021 10:06 19.8 C.  
11-06-2021 19:20 19.2 C.  
11-06-2021 23:09 19.4 C.

Day 27 in conditioning  
12-06-2021 10:08 19.7 C.  
12-06-2021 16:45 19.7 C.  
12-06-2021 23:54 19.3 C.

Day 28 in conditioning  
13-06-2021 08:35 19.8 C.  
13-06-2021 13:50 19.5 C.  
13-06-2021 23:02 19.4 C.

Day 29 in conditioning  
14-06-2021 08:06 19.5 C.  
14-06-2021 16:43 19.7 C.  
14-06-2021 23:37 19.0 C.

Day 30 in conditioning  
15-06-2021 07:31 19.5 C.  
15-06-2021 19:33 19.8 C.  
15-06-2021 23:55 19.9 C.

Day 31 in conditioning  
16-06-2021 09:31 19.9 C.  
16-06-2021 17:15 19.1 C.  
16-06-2021 23:12 19.6 C.

Day 32 in conditioning  
17-06-2021 08:49 19.4 C.  
17-06-2021 17:30 19.1 C.  
17-06-2021 22:51 19.7 C.

Day 33 in conditioning  
18-06-2021 08:03 19.5 C.  
18-06-2021 15:17 19.9 C.  
18-06-2021 23:26 20.7 C.

Day 34 in conditioning  
19-06-2021 08:01 20.3 C.  
19-06-2021 16:30 20.2 C.  
19-06-2021 22:49 20.0 C.

Day 35 in conditioning  
20-06-2021 09:34 20.6 C.  
20-06-2021 16:59 20.3 C.  
20-06-2021 23:50 20.2 C.

Day 36 in conditioning  
21-06-2021 06:40 20.0 C.  
21-06-2021 21:00 19.0 C.

Day 37 in conditioning  
22-06-2021 06:30 19.2 C.  
22-06-2021 20:02 19.1 C.

Day 38 in conditioning  
23-06-2021 05:41 19.5 C.  
23-06-2021 16:59 19.0 C.  
23-06-2021 22:48 19.8 C.

Day 39 in conditioning  
24-06-2021 09:00 19.4 C.  
24-06-2021 13:40 19.2 C.  
24-06-2021 22:16 19.4 C.

# Batch #10 - 2 May 2021

## Batch Notes

Day 40 in conditioning

25-06-2021 11:55 19.1 C.

25-06-2021 23:53 19.2 C.

Day 41 in conditioning

26-06-2021 10:53 19.2 C.

26-06-2021 16:58 19.2 C.

26-06-2021 22:46 19.5 C.

Day 42 in conditioning

27-06-2021 09:51 19.0 C.

27-06-2021 18:08 19.4 C.

## Extra Measured Values

Strike Temperature	68.7
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Strike Water pH	5.5
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Sparge Water Temperature	68.1
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Sparge Water pH	6
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Pitch Temperature	17.4
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## Batch Log

2 May 2021	Brew Date
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2 May 2021	Fermentation Start
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2 May 2021 08:47	Status: Brewing
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2 May 2021 16:54	SV = 17.0 C
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2 May 2021 16:54	Status: Fermenting
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9 May 2021 14:27	Added 14 grams Citra and 14.27 grams Centennial hops to the fermenter
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12 May 2021 09:51	SV = 17.3 C.
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12 May 2021 14:17	SV = 17.7 C
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12 May 2021 17:06	SV = 18.0 C
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12 May 2021 18:31	SV = 18.3 C
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12 May 2021 20:23	SV = 18.7 C
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12 May 2021 22:12	SV = 19.0 C
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12 May 2021 23:58	SV = 19.5 C
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16 May 2021	Bottling Date
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16 May 2021 17:25	Filled 14 Steinie bottles (33 cl)
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16 May 2021 17:51	SV = 17.0 C
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31 May 2021 21:35	SV = 15.0 C
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1 June 2021 00:10	SV = 16.0 C
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# Batch #10 - 2 May 2021

## Batch Log

27 June 2021 23:07	Status: Completed
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