

Batch #9 - 4 Apr 2021

07 SMaSH Simcoe v2 - 5.8%

American Pale Ale

Brewer: The Thirsty Otter

Type: All Grain

IBU : 40 (Tinseth)
 BU/GU : 0.73
 Colour : 10 EBC
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.028
 Original Gravity : 1.055
 Final Gravity : 1.011

Fermentables (393 g)

389 g - Maris Otter Pale Ale Malt 5.9 EBC (99%)
 ^ Lot # 694-201130-111430-176081-1/1
 ^ The Malt Miller (UK) MAL-00-036
 4 g - Sugar, Table (Sucrose) 2 EBC (1%)
 ^ Albert Heijn (NL)

Hops (5.1 g)

30 min - 1.5 g - Simcoe (T90) - 13.3% (27 IBU)
 ^ Lot # 694-201130-111430-176081-HOP-05-004-R...
 ^ The Malt Miller (UK) HOP-05-004
 5 min - 1.5 g - Simcoe (T90) - 13.3% (9 IBU)
 ^ Lot # 694-201130-111430-176081-HOP-05-004-R...
 ^ The Malt Miller (UK) HOP-05-004

Hop Stand

10 min hopstand @ 80 °C
 10 min - 2.1 g - Simcoe (T90) - 13.3% (4 IBU)

Miscellaneous

Mash - 0.236 ml - Lactic Acid 80% 80%
 ^ Lot # 20200213
 ^ Brouwstore (NL) 003.002.3
 Mash - 0.851 l - NL Spa Reine Flat Mineral Water
 ^ AH (NL)
 Sparge - 1.11 l - NL Spa Reine Flat Mineral W...
 ^ AH (NL)
 30 min - Boil - 0.032 g - Lipohop K
 ^ The Malt Miller (UK)
 10 min - Boil - 0.214 g - Irish Moss
 ^ Lot # 4348
 ^ Brouwstore (NL)
 10 min - Boil - 0.011 g - Servomyces
 ^ Lot # 154001112904ABV
 ^ Brouwstore (NL)
 Bottling - 2 items - 33 cl Steinie bottle Fle...

Yeast

1 pkg - Fermentis Harvested slurry from Batch...
 ^ Lot # 52766 1049 269
 ^ The Malt Miller (UK) YEA-02-025

02 PET Bottle 1.5L (60min) (rev 4)

Batch Size : 1.2 L
 Boil Size : 3.68 L
 Post-Boil Vol : 1.87 L

Mash Water : 1.17 L
 Sparge Water : 2.88 L
 Boil Time : 60 min
 Total Water : 4.05 L



10 EBC

Brewhouse Efficiency: 52.7%
 Mash Efficiency: 79.1%

Mash Profile

01 One Step Mash (60 min)
 73.3 °C - Strike Temp
 67 °C - 60 min - Temperature

Fermentation Profile

01 Ale + DR + Conditioning
 20 °C - 10 days - Primary
 23 °C - 4 days - Diacetyl rest
 20 °C - 14 days - Carbonation
 15 °C - 28 days - Conditioning

Measurements

Mash pH: 5.5

Boil Volume:

Pre-Boil Gravity: 1.041

Post-Boil Kettle Volume: 1.2

Original Gravity: 1.051

Fermenter Top-Up:

Fermenter Volume: 1.2

Final Gravity: 1.002

Bottling Volume: 0.66

Recipe Notes

Malt is ordered with standard crush @ The Malt Miller (<https://www.themaltmiller.co.uk/>).

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Recipe Notes

No minerals added (Ca = 5, Mg = 2, Na =3, Cl = 5, SO4 = 4, HCO3 = 17).

Batch Notes

04-04-2021 10:25 4 L Spa flat mineral water.
04-04-2021 10:26 1.1 mL Lactic acid.
04-04-2021 10:30 pH < 5.2 @ 20 C.
04-04-2021 10:38 Mash in @ 73.2 C.
Lump hunting.
04-04-2021 11:38 start batch sparging.
04-04-2021 12:45 Batch sparged with 5 L Spa flat mineral water in 3 batches.
04-04-2021 12:48 SG = 1.031 @ 48 C --> 1.041 @ 20 C.
04-04-2021 12:50 wort level = 16.5 cm --> 8.25 L pre boil volume.
04-04-2021 12:53 added 0.38 grams Lipohop K.
04-04-2021 13:07 started boil.
04-04-2021 13:37 added 5 grams Simcoe pellet hops in a hop sock.
04-04-2021 13:57 added 0.15 grams Servomyces yeast nutrient.
04-04-2021 13:57 added 1 gram Irish Moss.
04-04-2021 13:57 added wort chiller.
04-04-2021 14:02 added 5 grams Simcoe pellet hops in a hop sock.
04-04-2021 14:08 flame out
04-04-2021 14:42 start hop stand @ 79.8 C.
04-04-2021 14:42 added 10 grams Simcoe pellet hops in hop sock
04-04-2021 14:52 end hop stand @ 73.3 C.
04-04-2021 15:15 wort level = 13 cm --> 6.5 L post boil volume.
04-04-2021 15:18 SG = 1.050 @ 24.8 C --> 1.051 @ 20 C.
04-04-2021 15:20 1.2 L wort in a PET bottle with screw cap (1.5 L volume).

Day 0 in fermentation

04-04-2021 15:50 pitched harvested yeast from Batch #7 (A1) @ 24.8 C.
04-04-2021 18:33 19.2 C.
04-04-2021 21:53 19.5 C.

Day 1 in fermentation

05-04-2021 08:59 19.5 C.
05-04-2021 11:23 19.8 C.
05-04-2021 13:15 19.5 C.
05-04-2021 17:13 19.3 C.
05-04-2021 23:40 19.7 C.

Day 2 in fermentation

06-04-2021 08:21 19.7 C.
06-04-2021 12:42 19.8 C.
06-04-2021 15:22 19.9 C.
06-04-2021 20:22 19.5 C.
06-04-2021 22:50 20.0 C.

Day 3 in fermentation

07-04-2021 09:29 19.9 C.
07-04-2021 11:32 19.5 C.
07-04-2021 16:37 19.5 C.
07-04-2021 22:58 20.0 C.

Day 4 in fermentation

08-04-2021 07:51 19.0 C.
08-04-2021 13:12 20.0 C.
08-04-2021 17:12 19.9 C.
08-04-2021 23:14 19.3 C.

Day 5 in fermentation

09-04-2021 07:00 19.7 C.
09-04-2021 14:19 19.9 C.
09-04-2021 22:17 19.8 C.

Day 6 in fermentation

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Batch Notes

10-04-2021 09:39 19.6 C.
10-04-2021 15:26 18.9 C.
10-04-2021 15:26 PET fermenter with experiment shaken, not stirred.
10-04-2021 22:16 19.4 C.

Day 7 in fermentation

11-04-2021 09:23 19.5 C.
11-04-2021 13:42 19.0 C.
11-04-2021 14:50 19.4 C.
11-04-2021 17:29 18.9 C.
11-04-2021 18:40 18.8 C.
11-04-2021 21:50 19.2 C.

Day 8 in fermentation

12-04-2021 08:13 19.4 C.
12-04-2021 13:39 19.0 C.
12-04-2021 17:40 19.1 C.
12-04-2021 22:27 19.0 C.

Day 9 in fermentation

13-04-2021 07:52 19.7 C.
13-04-2021 12:10 19.8 C.
13-04-2021 19:00 19.2 C.
13-04-2021 23:04 19.1 C.

Day 10 in fermentation

14-04-2021 08:15 19.4 C.
14-04-2021 08:22 SV = 23.0 C.
14-04-2021 12:10 21.7 C.
14-04-2021 20:00 22.3 C.
14-04-2021 23:21 23.0 C.

Day 11 in fermentation

15-04-2021 07:27 22.7 C.
15-04-2021 15:40 22.1 C.
15-04-2021 23:09 22.0 C.

Day 12 in fermentation

16-04-2021 07:30 22.0 C.
16-04-2021 12:38 22.1 C.
16-04-2021 18:07 22.8 C.

Day 13 in fermentation

17-04-2021 09:04 22.0 C.
17-04-2021 12:02 23.0 C.
17-04-2021 16:18 23.0 C.
17-04-2021 21:49 22.3 C.

Day 14 in fermentation

18-04-2021 09:24 22.8 C.
18-04-2021 14:23 22.4 C.

Bottling day

18-04-2021 17:15 FG = 1.002 @ 23 C --> ABV = 6.8 %.
18-04-2021 17:18 bottled PET fermenter beer in 2 Flensburg swing tops Steinie bottles, added 2 grams table sugar in each bottle.

Day 1 in conditioning

19-04-2021 09:30 19.6 C.
19-04-2021 13:25 19.6 C.
19-04-2021 18:51 19.2 C.
19-04-2021 23:05 20.0 C.

Day 2 in conditioning

20-04-2021 07:52 19.6 C.
20-04-2021 12:43 20.0 C.

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20-04-2021 18:47 19.0 C.
20-04-2021 20:21 20.1 C.

Day 3 in conditioning

21-04-2021 05:40 20.1 C.
21-04-2021 12:29 19.9 C.
21-04-2021 19:33 19.8 C.

Day 4 in conditioning

22-04-2021 08:35 18.9 C.
22-04-2021 12:53 20.0 C.
22-04-2021 17:20 19.0 C.
22-04-2021 21:02 20.1 C.

Day 5 in conditioning

23-04-2021 05:59 19.0 C.
23-04-2021 12:50 19.8 C.
23-04-2021 18:57 20.0 C.
23-04-2021 22:42 19.0 C.

Day 6 in conditioning

24-04-2021 10:16 20.0 C.
24-04-2021 14:37 19.1 C.
24-04-2021 20:05 19.4 C.
24-04-2021 23:45 19.6 C.

Day 7 in conditioning

25-04-2021 09:03 20.0 C.
25-04-2021 12:15 19.0 C.
25-04-2021 19:35 19.0 C.
25-04-2021 23:41 19.6 C.

Day 8 in conditioning

26-04-2021 08:14 19.0 C.
26-04-2021 12:52 20.0 C.
26-04-2021 18:50 19.6 C.
26-04-2021 23:42 19.0 C.

Day 9 in conditioning

27-04-2021 08:51 19.0 C.
27-04-2021 15:22 19.0 C.
27-04-2021 21:16 20.0 C.

Day 10 in conditioning

28-04-2021 08:45 19.2 C.
28-04-2021 13:46 19.3 C.
28-04-2021 23:19 19.0 C.

Day 11 in conditioning

29-04-2021 09:44 20.0 C.
29-04-2021 17:09 20.0 C.
29-04-2021 23:57 20.1 C.

Day 12 in conditioning

30-04-2021 07:47 20.0 C.
30-04-2021 12:25 19.6 C.
30-04-2021 21:09 20.0 C.

Day 13 in conditioning

01-05-2021 11:09 19.9 C.
01-05-2021 17:53 19.9 C.
01-05-2021 23:40 19.1 C.

Day 14 in conditioning

02-05-2021 08:25 19.6 C.
02-05-2021 14:35 transferred bottles to the cellar.

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Batch Notes

02-05-2021 18:12 17.3 C.
02-05-2021 23:15 16.5 C.

Day 15 in conditioning
03-05-2021 09:33 16.4 C.
03-05-2021 20:17 16.0 C.
03-05-2021 23:51 16.9 C.

Day 16 in conditioning
04-05-2021 08:15 16.2 C.
04-05-2021 14:30 16.5 C.
04-05-2021 20:30 16.3 C.
04-05-2021 23:44 16.2 C.

Day 17 in conditioning
05-05-2021 10:08 15.7 C.
05-05-2021 16:27 16.0 C.
05-05-2021 23:58 16.5 C.

Day 18 in conditioning
06-05-2021 08:20 16.4 C.
06-05-2021 16:26 16.4 C.
06-05-2021 23:45 16.9 C.

Day 19 in conditioning
07-05-2021 08:22 16.6 C.
07-05-2021 12:53 16.6 C.
07-05-2021 19:36 16.8 C.

Day 20 in conditioning
08-05-2021 00:08 16.2 C.
08-05-2021 10:44 16.0 C.
08-05-2021 15:47 16.0 C.
08-05-2021 22:29 16.5 C.

Day 21 in conditioning
09-05-2021 09:46 16.2 C.
09-05-2021 16:46 16.9 C.
09-05-2021 23:19 16.7 C.

Day 22 in conditioning
10-05-2021 10:26 16.0 C.

Day 23 in conditioning
11-05-2021 10:11 16.2 C.
11-05-2021 15:00 16.5 C.
11-05-2021 19:21 16.7 C.
11-05-2021 23:56 16.9 C.

Day 24 in conditioning
12-05-2021 09:21 16.7 C.
12-05-2021 13:41 16.7 C.
12-05-2021 18:22 16.8 C.

Extra Measured Values

Strike Temperature	73.2
Strike Water pH	5.2
Sparge Water pH	6
Sparge Water Temperature	70
Pitch Temperature	24.8

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Batch Log	
4 April 2021	Brew Date
4 April 2021	Fermentation Start
4 April 2021 10:38	Status: Brewing
4 April 2021 15:50	Pitched US-05 yeast slurry from Batch #7 (A1) @ 24.8 C, SV = 20.0 C
10 April 2021 15:26	Fermenter shaken, not stirred
14 April 2021 08:22	SV = 23.0 C
18 April 2021	Bottling Date
18 April 2021 17:18	Filled 2 Steinie bottles (33 cl)
18 April 2021 17:20	Status: Conditioning