

## Batch #43 - 25 Nov 2024

## Refuse/Resist (Ukrainian Golden Ale) v3 - 6.6%

## Ukrainian Golden Ale

Brewer: The Thirsty Otter

Type: All Grain

IBU : 25 (Tinseth)  
 BU/GU : 0.34  
 Colour : 15 EBC  
 Carbonation : 2 CO2-vol

Pre-Boil Gravity : 1.036  
 Original Gravity : 1.071  
 Total Gravity : 1.073  
 Final Gravity : 1.023

## Fermentables (507 g)

469 g - Pale Ale Malt 10 EBC (92.5%)  
 ^ Lot # (28.06.2022)  
 ^ Brouwmaatje (NL) BM-BL.051.613.25/1  
 23 g - Wheat Malt 5.5 EBC (4.5%)  
 ^ Lot # (09.09.2021)  
 ^ Brouwmaatje (NL) 051.125.3  
 15 g - Chateau Biscuit 45 EBC (3%)  
 ^ Lot # 5425000394839 (24.11.2022)  
 7 g - Bottling - Sugar, Table (Sucrose) 2 EBC  
 ^ Albert Heijn (NL)

## Hops (4.6 g)

60 min - 1.3 g - Cascade (T90) - 7.5% (16 IBU)  
 ^ Brouwmaatje (NL) BM-BL.053.148.3/100  
 30 min - 0.9 g - Saaz - 3.6% (4 IBU)  
 ^ Lot # T9020044SAA  
 ^ Brouwmaatje (NL) BM-HUM.420000 Humlegarden...  
 15 min - 1.2 g - Saaz - 3.6% (3 IBU)  
 ^ Lot # T9020044SAA  
 ^ Brouwmaatje (NL) BM-HUM.420000 Humlegarden...

## Hop Stand

30 min hopstand @ 80 °C  
 30 min - 1.2 g - Cascade (T90) - 7.5% (2 IBU)  
 ^ Brouwmaatje (NL) BM-BL.053.148.3/100

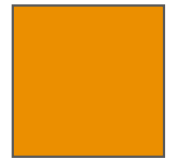
## Miscellaneous

Mash - 0.489 g - Calcium Chloride (CaCl2) 33...  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.011 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 0.062 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 0.144 g - Gypsum (CaSO4)  
 ^ Brouwmaatje (NL)  
 Mash - 0.129 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 Mash - 1.111 l - NL Spa Reine Flat Mineral Water  
 ^ AH (NL)  
 Sparge - 0.984 l - NL Spa Reine Flat Mineral...  
 ^ AH (NL)  
 10 min - Boil - 0.214 g - Irish Moss  
 ^ Lot # 4348  
 ^ Brouwstore (NL)  
 5 min - Boil - 1.2 g - Coriander Seed  
 ^ Brouwmaatje (NL)

## 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 : 1.52 L  
 Sparge Water : 2.65 L  
 Boil Time : 60 min  
 Total Water : 4.17 L



15 EBC

Brewhouse Efficiency: 52.7%  
 Mash Efficiency: 79.1%

## Mash Profile

04 High fermentability (60 min)  
 77.8 °C - Strike Temp  
 71 °C - 60 min - Temperature

## Fermentation Profile

01 Ale + DR + Conditioning  
 17 °C - 10 days - Primary  
 21 °C - 4 days - Diacetyl rest  
 18 °C - 14 days - Carbonation  
 18 °C - 28 days - Conditioning

## Water Profile

NL Spa Reine Flat Mineral Water (www.ah.nl) (...  
 Ca 108 Mg 9 Na 8 Cl 128 SO 121 HCO 17

SO/Cl ratio: 1

Mash pH: 4.79

Sparge pH: 6

## Measurements

Mash pH: 5.34

Boil Volume:

Pre-Boil Gravity: 1.050

Post-Boil Kettle Volume:

Original Gravity: 1.071

Fermenter Top-Up:

Fermenter Volume: 1.2

Final Gravity: 1.011

Bottling Volume: 0.9

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## Recipe Notes

Add aroma hops and cool over night.

## Batch Notes

Brew day  
25-11-2024

### Day 0 in fermentation

26-11-2024 09:14 pH = 5.07 @ 13.9 C.  
26-11-2024 09:25 pitched 2.40 gram S-04 yeast.  
26-11-2024 12:00 17.0 C.  
26-11-2024 16:00 16.1 C.  
26-11-2024 20:00 17.1 C.

### Day 1 in fermentation

27-11-2024 00:00 17.5 C.  
27-11-2024 04:00 17.5 C.  
27-11-2024 08:00 17.5 C.  
27-11-2024 12:00 17.1 C., shake.  
27-11-2024 20:00 17.0 C.

### Day 2 in fermentation

28-11-2024 00:00 17.5 C.  
28-11-2024 04:00 17.5 C.  
28-11-2024 08:00 16.5 C.  
28-11-2024 12:00 16.7 C., shake.  
28-11-2024 16:00 17.1 C.  
28-11-2024 20:00 17.3 C.

### Day 3 in fermentation

29-11-2024 00:00 17.5 C.  
29-11-2024 04:00 17.6 C.  
29-11-2024 08:00 17.5 C.  
29-11-2024 12:00 17.5 C.  
29-11-2024 16:00 17.5 C.  
29-11-2024 20:00 17.5 C.

### Day 4 in fermentation

30-11-2024 00:00 17.5 C.  
30-11-2024 04:00 17.4 C.  
30-11-2024 08:00 17.1 C.  
30-11-2024 12:00 16.8 C.  
30-11-2024 16:00 17.4 C.  
30-11-2024 20:00 17.0 C.

### Day 5 in fermentation

01-12-2024 00:00 17.5 C.  
01-12-2024 04:00 17.4 C.  
01-12-2024 08:00 17.0 C.  
01-12-2024 12:00 16.8 C.  
01-12-2024 16:00 16.5 C.  
01-12-2024 20:00 17.0 C.

### Day 6 in fermentation

02-12-2024 00:00 17.3 C.  
02-12-2024 04:00 17.5 C.  
02-12-2024 08:00 17.5 C.  
02-12-2024 12:00 17.4 C.  
02-12-2024 16:00 17.5 C.  
02-12-2024 20:00 17.5 C.

### Day 7 in fermentation

03-12-2024 00:00 17.5 C.  
03-12-2024 04:00 17.5 C.  
03-12-2024 08:00 17.7 C.

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## Batch Notes

03-12-2024 12:00 17.5 C.  
03-12-2024 16:00 17.5 C.  
03-12-2024 20:00 17.5 C.

### Day 8 in fermentation

04-12-2024 00:00 17.5 C.  
04-12-2024 03:45 17.5 C.  
04-12-2024 08:00 17.2 C.  
04-12-2024 12:00 17.1 C.  
04-12-2024 16:00 17.0 C.  
04-12-2024 20:00 16.4 C.  
04-12-2024 23:45 16.7 C.

### Day 9 in fermentation

05-12-2024 04:00 16.5 C.  
05-12-2024 08:00 16.5 C.  
05-12-2024 12:00 16.7 C.  
05-12-2024 16:00 16.9 C.  
05-12-2024 20:00 16.9 C.

### Day 10 in fermentation

06-12-2024 00:00 17.1 C.  
06-12-2024 04:00 16.9 C.  
06-12-2024 08:15 17.5 C.  
06-12-2024 12:00 17.1 C.  
06-12-2024 16:00 17.5 C.  
06-12-2024 20:00 19.8 C.

### Day 11 in fermentation

07-12-2024 01:00 21.0 C.  
07-12-2024 04:00 21.0 C.  
07-12-2024 08:00 21.0 C.  
07-12-2024 12:00 20.8 C.  
07-12-2024 16:00 20.5 C.  
07-12-2024 20:00 20.1 C.

### Day 12 in fermentation

08-12-2024 00:00 20.0 C.  
08-12-2024 04:00 20.1 C.  
08-12-2024 08:00 20.4 C.  
08-12-2024 12:00 20.5 C.  
08-12-2024 16:00 20.7 C.  
08-12-2024 20:00 21.0 C.

### Day 13 in fermentation

09-12-2024 00:00 20.7 C.  
09-12-2024 04:00 20.5 C.  
09-12-2024 08:00 20.2 C.  
09-12-2024 12:00 20.2 C.  
09-12-2024 16:00 20.0 C.  
09-12-2024 20:00 20.0 C.

### Day 14 in fermentation

10-12-2024 00:00 20.0 C.  
10-12-2024 04:00 20.1 C.  
10-12-2024 08:00 20.4 C.  
10-12-2024 12:00 20.9 C.  
10-12-2024 16:00 21.1 C.  
10-12-2024 20:00 21.1 C.

### Day 15 in fermentation

11-12-2024 00:00 21.0 C.  
11-12-2024 04:00 20.8 C.  
11-12-2024 08:00 20.4 C.  
11-12-2024 12:00 20.2 C.  
11-12-2024 16:00 20.0 C.

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## Batch Notes

11-12-2024 20:00 20.0 C.

### Day 16 in fermentation

12-12-2024 00:00 20.0 C.

12-12-2024 04:00 20.1 C.

12-12-2024 08:00 20.3 C.

12-12-2024 12:00 20.7 C.

12-12-2024 16:00 21.0 C.

12-12-2024 20:00 21.0 C.

### Day 17 in fermentation

13-12-2024 00:00 20.9 C.

13-12-2024 04:00 20.9 C.

13-12-2024 08:00 20.3 C.

13-12-2024 12:00 20.0 C.

13-12-2024 16:00 20.0 C.

### Bottling day

13-12-2024 19:21 15.9 C., SG = 1.011, pH = 4.24.

### Day 0 in conditioning

13-12-2024 20:00 19.9 C.

### Day 1 in conditioning

14-12-2024 00:00 17.3 C.

14-12-2024 04:00 17.5 C.

14-12-2024 08:00 17.4 C.

14-12-2024 12:00 16.9 C.

14-12-2024 16:00 16.8 C.

14-12-2024 20:00 16.5 C.

### Day 2 in conditioning

15-12-2024 02:30 17.1 C.

15-12-2024 04:00 16.5 C.

15-12-2024 08:00 16.9 C.

15-12-2024 12:00 17.3 C.

15-12-2024 16:00 13.2 C.

15-12-2024 20:00 16.8 C.

### Day 3 in conditioning

16-12-2024 00:00 16.9 C.

16-12-2024 04:00 17.3 C.

16-12-2024 08:00 17.5 C.

16-12-2024 12:00 17.1 C.

16-12-2024 16:00 16.7 C.

16-12-2024 20:00 16.8 C.

### Day 4 in conditioning

17-12-2024 00:00 17.5 C.

17-12-2024 04:00 17.0 C.

17-12-2024 08:00 16.5 C.

17-12-2024 12:00 17.2 C.

17-12-2024 16:00 17.1 C.

17-12-2024 19:45 16.7 C.

### Day 5 in conditioning

18-12-2024 00:00 17.4 C.

18-12-2024 04:00 17.1 C.

18-12-2024 08:00 16.5 C.

18-12-2024 12:00 17.5 C.

18-12-2024 16:00 16.7 C.

18-12-2024 20:00 16.7 C.

### Day 6 in conditioning

19-12-2024 00:00 17.5 C.

19-12-2024 04:00 17.2 C.

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## Batch Notes

19-12-2024 08:00 16.7 C.  
19-12-2024 12:00 16.8 C.  
19-12-2024 16:00 17.5 C.  
19-12-2024 20:00 17.0 C.

### Day 7 in conditioning

20-12-2024 00:00 16.5 C.  
20-12-2024 04:00 17.1 C.  
20-12-2024 08:00 17.4 C.  
20-12-2024 12:00 17.2 C.  
20-12-2024 16:00 16.5 C.  
20-12-2024 20:00 16.8 C.

### Day 8 in conditioning

21-12-2024 00:00 17.4 C.  
21-12-2024 04:00 16.7 C.  
21-12-2024 08:00 17.1 C.  
21-12-2024 12:00 17.4 C.  
21-12-2024 16:00 16.4 C.  
21-12-2024 20:00 17.0 C.

### Day 9 in conditioning

22-12-2024 00:00 17.6 C.  
22-12-2024 04:00 16.6 C.  
22-12-2024 08:00 16.9 C.  
22-12-2024 12:00 17.5 C.  
22-12-2024 16:00 17.0 C.  
22-12-2024 20:00 16.5 C.

### Day 10 in conditioning

23-12-2024 00:00 16.6 C.  
23-12-2024 04:00 16.8 C.  
23-12-2024 08:00 17.0 C.  
23-12-2024 12:00 17.2 C.  
23-12-2024 16:00 17.4 C.  
23-12-2024 20:00 17.4 C.

### Day 11 in conditioning

24-12-2024 00:00 17.5 C.  
24-12-2024 04:00 17.6 C.  
24-12-2024 08:00 17.5 C.  
24-12-2024 12:00 17.6 C.  
24-12-2024 15:45 17.5 C.  
24-12-2024 20:00 17.1 C.

### Day 12 in conditioning

25-12-2024 00:00 16.5 C.  
25-12-2024 04:00 16.8 C.  
25-12-2024 08:00 17.2 C.  
25-12-2024 12:00 17.5 C.  
25-12-2024 16:00 17.2 C.  
25-12-2024 20:00 16.7 C.

### Day 13 in conditioning

26-12-2024 00:00 16.5 C.  
26-12-2024 04:00 17.0 C.  
26-12-2024 08:00 17.4 C.  
26-12-2024 12:00 17.5 C.  
26-12-2024 16:00 16.8 C.  
26-12-2024 20:00 16.6 C.

### Day 14 in conditioning

27-12-2024 00:00 17.1 C.  
27-12-2024 04:15 17.5 C.  
27-12-2024 08:00 17.4 C.  
27-12-2024 12:00 16.6 C.

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27-12-2024 16:00 16.5 C.  
27-12-2024 20:00 16.7 C.

### Day 15 in conditioning

28-12-2024 00:00 16.8 C.  
28-12-2024 04:00 16.9 C.  
28-12-2024 08:00 16.9 C.  
28-12-2024 12:00 16.8 C.  
28-12-2024 16:00 16.8 C.  
28-12-2024 20:00 16.8 C.

### Day 16 in conditioning

29-12-2024 00:00 16.6 C.  
29-12-2024 04:00 16.5 C.  
29-12-2024 08:00 16.8 C.  
29-12-2024 12:00 17.1 C.  
29-12-2024 16:00 16.8 C.  
29-12-2024 20:00 16.7 C.

### Day 17 in conditioning

30-12-2024 00:00 16.5 C.  
30-12-2024 04:00 16.5 C.  
30-12-2024 08:00 16.8 C.  
30-12-2024 12:00 17.2 C.  
30-12-2024 16:00 17.3 C.  
30-12-2024 20:00 17.4 C.

### Day 18 in conditioning

31-12-2024 00:00 17.4 C.  
31-12-2024 04:00 16.7 C.  
31-12-2024 08:00 16.7 C.  
31-12-2024 12:00 17.0 C.  
31-12-2024 16:00 17.0 C.  
31-12-2024 20:00 17.1 C.

### Day 19 in conditioning

01-01-2025 00:00 17.2 C.  
01-01-2025 04:00 17.4 C.  
01-01-2025 08:00 17.0 C.  
01-01-2025 12:00 16.5 C.  
01-01-2025 16:00 16.7 C.  
01-01-2025 20:00 17.0 C.

### Day 20 in conditioning

02-01-2025 00:00 17.1 C.  
02-01-2025 04:00 17.3 C.  
02-01-2025 08:00 17.4 C.  
02-01-2025 12:00 17.3 C.  
02-01-2025 16:00 17.2 C.  
02-01-2025 20:00 17.3 C.

### Day 21 in conditioning

03-01-2025 00:00 17.0 C.  
03-01-2025 04:00 16.8 C.  
03-01-2025 08:00 16.6 C.  
03-01-2025 12:00 17.3 C.  
03-01-2025 16:00 16.7 C.  
03-01-2025 20:00 16.5 C.

### Day 22 in conditioning

04-01-2025 00:00 17.5 C.  
04-01-2025 04:00 17.2 C.  
04-01-2025 08:00 16.9 C.  
04-01-2025 12:00 16.8 C.  
04-01-2025 16:00 17.4 C.  
04-01-2025 20:00 17.2 C.

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## Batch Notes

### Day 23 in conditioning

05-01-2025 00:00 16.9 C.  
05-01-2025 04:00 17.1 C.  
05-01-2025 08:00 17.2 C.  
05-01-2025 12:00 16.7 C.  
05-01-2025 16:00 17.2 C.  
05-01-2025 20:00 17.3 C.

### Day 24 in conditioning

06-01-2025 00:00 17.5 C.  
06-01-2025 04:00 16.9 C.  
06-01-2025 08:00 16.8 C.  
06-01-2025 12:00 17.5 C.  
06-01-2025 16:00 16.6 C.  
06-01-2025 20:00 16.9 C.

### Day 25 in conditioning

07-01-2025 00:00 17.3 C.  
07-01-2025 04:00 17.5 C.  
07-01-2025 08:00 17.5 C.  
07-01-2025 12:00 17.3 C.  
07-01-2025 16:00 16.8 C.  
07-01-2025 20:00 16.8 C.

### Day 26 in conditioning

08-01-2025 00:00 16.5 C.  
08-01-2025 04:00 16.9 C.  
08-01-2025 08:00 17.5 C.  
08-01-2025 12:00 17.4 C.  
08-01-2025 16:00 17.3 C.  
08-01-2025 20:00 17.1 C.

### Day 27 in conditioning

09-01-2025 00:00 16.9 C.  
09-01-2025 04:00 16.9 C.  
09-01-2025 08:00 16.5 C.  
09-01-2025 12:00 17.3 C.  
09-01-2025 16:00 17.1 C.  
09-01-2025 20:00 16.7 C.

### Day 28 in conditioning

10-01-2025 00:00 17.4 C.  
10-01-2025 04:00 17.1 C.  
10-01-2025 08:00 16.8 C.  
10-01-2025 12:00 17.4 C.  
10-01-2025 16:00 17.3 C.  
10-01-2025 20:00 17.1 C.

### Day 29 in conditioning

11-01-2025 00:00 16.5 C.  
11-01-2025 04:00 17.2 C.  
11-01-2025 08:00 17.4 C.  
11-01-2025 12:00 16.5 C.  
11-01-2025 16:00 17.1 C.  
11-01-2025 20:00 16.7 C.

### Day 30 in conditioning

12-01-2025 00:00 17.2 C.  
12-01-2025 04:00 16.5 C.  
12-01-2025 08:00 17.1 C.  
12-01-2025 12:00 17.4 C.  
12-01-2025 16:00 17.0 C.  
12-01-2025 20:00 16.5 C.

### Day 31 in conditioning

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## Batch Notes

13-01-2025 00:00 17.3 C.  
13-01-2025 04:00 16.9 C.  
13-01-2025 08:00 17.3 C.  
13-01-2025 12:00 16.7 C.  
13-01-2025 16:00 17.3 C.  
13-01-2025 20:00 16.7 C.

### Day 32 in conditioning

14-01-2025 00:00 17.2 C.  
14-01-2025 04:00 17.3 C.  
14-01-2025 08:00 17.4 C.  
14-01-2025 12:00 16.5 C.  
14-01-2025 16:00 17.2 C.  
14-01-2025 20:00 16.8 C.

### Day 33 in conditioning

15-01-2025 00:00 16.5 C.  
15-01-2025 04:00 16.6 C.  
15-01-2025 08:00 16.9 C.  
15-01-2025 12:00 16.5 C.  
15-01-2025 16:00 16.9 C.  
15-01-2025 20:00 17.0 C.

### Day 34 in conditioning

16-01-2025 00:00 17.3 C.  
16-01-2025 04:00 16.7 C.  
16-01-2025 08:00 16.5 C.  
16-01-2025 12:00 17.0 C.  
16-01-2025 16:00 17.1 C.  
16-01-2025 20:00 17.0 C.

### Day 35 in conditioning

17-01-2025 00:00 17.1 C.  
17-01-2025 04:00 17.1 C.  
17-01-2025 08:00 16.9 C.  
17-01-2025 12:00 16.7 C.  
17-01-2025 16:00 16.4 C.  
17-01-2025 20:00 17.4 C.

### Day 36 in conditioning

18-01-2025 00:00 17.1 C.  
18-01-2025 04:00 16.7 C.  
18-01-2025 08:00 17.2 C.  
18-01-2025 12:00 16.5 C.  
18-01-2025 16:00 17.1 C.  
18-01-2025 20:00 17.4 C.

### Day 37 in conditioning

19-01-2025 00:00 17.4 C.  
19-01-2025 04:00 16.9 C.  
19-01-2025 08:00 17.3 C.  
19-01-2025 12:00 17.4 C.  
19-01-2025 16:00 16.5 C.  
19-01-2025 20:00 16.9 C.

### Day 38 in conditioning

20-01-2025 00:00 17.2 C.  
20-01-2025 04:00 17.3 C.  
20-01-2025 08:00 17.3 C.  
20-01-2025 16:00 17.0 C.  
20-01-2025 20:00 17.2 C.

### Day 39 in conditioning

21-01-2025 00:00 17.4 C.  
21-01-2025 04:00 16.9 C.  
21-01-2025 08:00 17.2 C.



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## Batch Notes

21-01-2025 12:00 17.4 C.  
 21-01-2025 16:00 16.7 C.  
 21-01-2025 20:00 17.2 C.

Day 40 in conditioning  
 22-01-2025 00:00 17.3 C.  
 22-01-2025 04:00 17.4 C.  
 22-01-2025 08:00 17.3 C.  
 22-01-2025 12:00 16.9 C.  
 22-01-2025 16:00 17.2 C.  
 22-01-2025 20:00 16.8 C.

Day 41 in conditioning  
 23-01-2025 00:00 17.0 C.  
 23-01-2025 04:00 17.2 C.  
 23-01-2025 08:00 17.0 C.  
 23-01-2025 12:00 16.6 C.  
 23-01-2025 16:00 16.7 C.  
 23-01-2025 20:00 16.7 C.

Day 42 in conditioning  
 24-01-2025 00:00 16.5 C.  
 24-01-2025 04:00 16.9 C.  
 24-01-2025 08:00 16.9 C.  
 24-01-2025 12:00 17.2 C.  
 24-01-2025 16:00 17.4 C.  
 24-01-2025 20:00 17.3 C.  
 24-01-2025 23:45 16.9 C.

## Extra Measured Values

Strike Water Temperature	71
Sparge Water Temperature	71
Sparge Water pH	6.64
Strike Water pH	4.41
Pitch Temperature	13.9

## Batch Log

25 November 2024	Brew Date
25 November 2024 11:00	Status: Brewing
25 November 2024 16:20	Split off 1.2 L wort from Batch #41.
26 November 2024 09:00	SV = 17.0 C.
26 November 2024 09:25	Status: Fermenting
26 November 2024	Fermentation Start
26 November 2024 16:38	SV = 17.5 C.
6 December 2024 17:35	SV = 21.0 C.
13 December 2024 19:21	Filled 3 BNR bottles (30 cl).
13 December 2024	Bottling Date
13 December 2024 20:50	SV = 17.5 C.

# Batch #43 - 25 Nov 2024

Batch Log	
24 January 2025 23:59	Status: Completed