

Brewdog - #310 Clockwork Tangerine (clone) v3 - 4.6%

Fruit Beer

Author: Biggles Brewery

Type: All Grain

IBU : 22 (Tinseth)
 BU/GU : 0.51
 Colour : 25 EBC
 Carbonation : 2.2 CO2-vol

Pre-Boil Gravity : 1.032
 Original Gravity : 1.043
 Final Gravity : 1.008

Fermentables (1.07 kg)

1.02 kg - Red X 30 EBC (95.3%)
 ^ The Malt Miller (UK) MAL-00-020
 50 g - Carapils 4 EBC (4.7%)
 ^ The Malt Miller (UK) MAL-01-016

Hops (47.3 g)

70 min - 0.9 g - El Dorado (T90) - 14% (7 IBU)
 ^ The Malt Miller (UK) HOP-05-013
 70 min - 0.3 g - Citra - 13.8% (2 IBU)
 ^ Worcester Hop Shop (UK)
 10 min - 1.3 g - Ahtanum - 3.8% (1 IBU)
 ^ Worcester Hop Shop (UK)
 10 min - 1.3 g - Chinook (T90) - 11.3% (3 IBU)
 ^ The Malt Miller (UK) HOP-05-000
 10 min - 0.5 g - El Dorado (T90) - 14% (2 IBU)
 ^ The Malt Miller (UK) HOP-05-013
 10 min - 0.5 g - Citra - 13.8% (1 IBU)
 ^ Worcester Hop Shop (UK)

Hop Stand

15 min hopstand @ 80 °C
 15 min - 4.1 g - El Dorado (T90) - 14% (3 IBU)
 ^ The Malt Miller (UK) HOP-05-013
 15 min - 1.9 g - Mosaic (T90) - 11.8% (1 IBU)
 ^ The Malt Miller (UK) HOP-05-012
 15 min - 1.3 g - Chinook (T90) - 11.3% (1 IBU)
 ^ The Malt Miller (UK) HOP-05-000
 15 min - 1.2 g - Citra - 13.8% (1 IBU)
 ^ Worcester Hop Shop (UK)

01 Brouwpunt 5L (70min) (rev 4)

Batch Size : 5.6 L
 Boil Size : 8.06 L
 Post-Boil Vol : 5.96 L

Mash Water : 3.21 L
 Sparge Water : 6 L
 Boil Time : 70 min
 Total Water : 9.21 L



25 EBC

Brewhouse Efficiency: 71.8%
 Mash Efficiency: 73.3%

Mash Profile

High fermentability
 56.3 °C - Strike Temp
 52 °C - 30 min - Temperature
 65 °C - 30 min - Temperature
 72 °C - 30 min - Temperature
 78 °C - 10 min - Temperature

Fermentation Profile

Ale
 18 °C - 4 days - Primary
 20 °C - 2 days - Primary
 22 °C - 2 days - Primary
 10 °C - 6 days - Primary
 20 °C - 45 days - Conditioning

Water Profile

NL Hoofddorp Rein Tap Water (2020-Q1 WQR) (St...
 Ca 41 Mg 15 Na 67 Cl 71 SO 68 HCO 178

SO/Cl ratio: 1

Mash pH: 5.4

Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume:

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Dry Hops

10 days - 9 g - El Dorado (T90) - 14%
^ The Malt Miller (UK) HOP-05-013
10 days - 6.1 g - Citra - 13.8%
^ Worcester Hop Shop (UK)
10 days - 6 g - Mosaic (T90) - 11.8%
^ The Malt Miller (UK) HOP-05-012
10 days - 4.6 g - Chinook (T90) - 11.3%
^ The Malt Miller (UK) HOP-05-000
10 days - 3.7 g - Ahtanum - 3.8%
^ Worcester Hop Shop (UK)
10 days - 3.7 g - Cascade (Whole) - 5.58%
^ The Malt Miller (UK) HOP-01-000
10 days - 1 g - Amarillo (Whole) - 7.7%
^ The Malt Miller (UK) HOP-01-004

Miscellaneous

Mash - 0.56 g - Epsom Salt (MgSO4)
^ Lot # /2119000091
^ Brouwstore (NL) 055.027.7
Mash - 0.2 ml - Lactic Acid 80% 80%
^ Lot # 20200213
^ Brouwstore (NL) 003.002.3
10 min - Boil - 1 g - Irish Moss
^ Brouwstore (NL) 125.249.1
Bottling - 1.826 g - Tangerine Extract

Yeast

0.5 pkg - Fermentis Safale American US-05
^ The Malt Miller (UK) YEA-02-025

Recipe Notes

Target: ABV = 4.5 %, IBU = 37, EBC = 20

Go easy on the tangerine extract, a little goes a long way and more can be added to the keg later.