

Brewdog - #310 Clockwork Tangerine (clone) - 5%

American IPA

Author: Brewdog

Type: All Grain

IBU : 26 (Tinseth)
 Colour : 15 EBC
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.035
 Original Gravity : 1.047
 Total Gravity : 1.049
 Final Gravity : 1.011

Fermentables (1.16 kg)

1 kg - Pale Ale Malt 5.5 EBC (86.2%)
 ^ The Malt Miller (UK) MAL-00-042
 130 g - Caramalt 29.5 EBC (11.2%)
 ^ The Malt Miller (UK) MAL-01-014
 30 g - CaraMunich Type 3 150 EBC (2.6%)
 ^ The Malt Miller (UK) MAL-01-011
 30 g - Bottling - Sugar, Table (Sucrose) 2 EBC
 ^ Albert Heijn (NL)

Hops (55.3 g)

70 min - 1.4 g - Simcoe - 12.7% (9 IBU)
 70 min - 0.5 g - Citra - 11% (3 IBU)
 10 min - 1.4 g - Ahtanum - 6% (2 IBU)
 10 min - 1.4 g - Chinook - 13% (4 IBU)
 10 min - 0.6 g - Citra - 11% (1 IBU)
 10 min - 0.6 g - Simcoe - 12.7% (2 IBU)

Hop Stand

10 min hopstand @ 80 °C
 10 min - 5 g - Simcoe - 12.7% (3 IBU)
 10 min - 2.2 g - Mosaic - 12.5% (1 IBU)
 10 min - 1.4 g - Citra - 11% (1 IBU)
 10 min - 0.8 g - Chinook - 13% (0 IBU)

Dry Hops

7 days - 11.2 g - Simcoe - 12.7%
 7 days - 7 g - Citra - 11%
 7 days - 7 g - Mosaic - 12.5%
 7 days - 5.3 g - Chinook - 13%
 7 days - 4.2 g - Ahtanum - 6%
 7 days - 4.2 g - Summit - 18.5%
 7 days - 1.1 g - Amarillo (Whole) - 7.7%

Miscellaneous

Mash - 0.57 g - Epsom Salt (MgSO4)
 ^ Lot # /2119000091
 ^ Brouwstore (NL) 055.027.7
 Mash - 1 ml - Lactic Acid 80% 88%
 ^ Lot # 20200213
 ^ Brouwstore (NL) 003.002.3
 Mash - 3 items - pH paper strips 5.2 - 6.8
 ^ Lot # 20200422/1
 ^ Brouwstore (NL) 013.075.7
 60 min - Boil - 0.15 g - Lipohop K
 ^ The Malt Miller (UK) CH-03-013
 10 min - Boil - 0.06 g - Lallemand Servomyces
 ^ Lot # 154001112904ABV
 ^ Brouwstore (NL) 050.620.4
 10 min - Boil - 1 items - Wort Chiller
 ^ Brouwstore (NL) 057.020.20

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

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

Mash Water : 3.48 L
 Sparge Water : 5.81 L
 Boil Time : 70 min
 Total Water : 9.29 L



15 EBC

Brewhouse Efficiency: 71.8%
 Mash Efficiency: 73.3%

Mash Profile

Mash Steps
 72.1 °C - Strike Temp
 66 °C - 60 min - Infusion

Fermentation Profile

Imported
 18 °C - 0 days - Primary

Water Profile

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

SO/Cl ratio: 1
 Mash pH: 5.41

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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Recipe Notes

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