

08-English IPA

4/12/2018

Burton Ale

Original Gravity: 1.064

Final Gravity: 1.016

ADF: 75%

ABV: 6.3% (traditional), 6.6% (more accurate)

Tinseth IBUs: 42

(Modified Tinseth IBUs: 50)

-----Grain Bill-----

<u>Pounds</u>	<u>Grain, Fermentable, Other</u>
10.00	Pale Ale Malt, Briess
1.66	Munich (9 srm)
0.62	British Dark Crystal 75/85L
0.26	Chocolate (US, 350 SRM)

-----Misc Info-----

Fermentables: 12.54 Pounds
Mash Efficiency: 70%
Total Water Needed: 7.78 Gallons
Pre-Boil: 6.21 Gallons @ 1.051
Boil-Off Rate: 1.2 Gallons/Hr
Post-Boil Volume: 5.01 Gallons

---Other Timed Boil Additions---

Ingredient Amount Minutes

168

Combine milled grains with any mash salts/acids below and 3.92 Gallons H2O at 172F to settle at 154F.

use Brewer's Friend

Mash Salts/Acids: 2g CaCl2, 1.5g CaSO4, 2g NaCl, 2ml Lactic Acid,

Mash for 60 Minutes.

Lauter, then Sparge with 3.86 Gallons of 178F H2O (acidified with 8.69 ml Phosphoric Acid or 0.79 ml Lactic Acid) -OR-

Mash Out with 3.86 Gallons of 188F water and Lauter

Step	min.	Tgt Temp (F)	Infusion Needed
1	60	154	3.9 Gallons @ 168
2	15	168	3.9 Gallons @ 195
3			0.0 Gallons @ 195
total			7.8 Gallons @

Boil wort for 60 Minutes, adding any kettle salts below

Kettle Salts:

-----Kettle Hop Additions-----

<u>Hop</u>	<u>Type</u>	<u>Ounces</u>	<u>Boil Time</u>
Magnum, US	P	0.5	60
Challenger, UK	P	1	15
Cascade	P	1	10

-----Flameout/Whirlpool/Hopstand Hops-----

<u>Hop</u>	<u>Type</u>	<u>Ounces</u>	<u>Avg Temp</u>	<u>Minutes</u>
Cascade	P	0.5	190	15
Hallertau, German	P	1.5	190	15

-----Dry Hops-----

<u>Hop</u>	<u>Type</u>	<u>Ounces</u>	<u>Days</u>	<u>Temp</u>
Cascade	P	0.5	4	66
Hallertau, German	P	0.5	4	66

Yeast:

Wyeast 1098 - British Ale

After Boil and any high temp hopstand/whirlpool, cool wort to pitching temp.

Aerate Wort for 73 Seconds with O2 flowing at 1 liter per minute.

Pitch Yeast, Install Airlock/Blowoff, set up appropriate temperature control at 68 degrees, and have a beer.

Water Concentration Results:

Strike Water Result: 77 Ca ,2 Mg, 56 Na, 149 Cl, 68 SO4 , 43 HCO3

Mash pH: 5.38

Sparge Water Result: 17 Ca ,2 Mg, 3 Na, 3 Cl, 12 SO4 , 43 HCO3

Overall Water Result: 47 Ca ,2 Mg, 30 Na, 76 Cl, 40 SO4 , 43 HCO3