

BREWSHEET v2.0 (2010-06-17)

Batch			
Brew Name:	Hopfully IPA		
Bottle Top Code:	Calories per Pint:	244	
Estimated OG:	1.068	Actual OG:	1.074
Estimated FG:	1.016	Actual FG:	1.018
Estimated IBU:	90	Actual IBU:	115
Estimated SRM:		Actual SRM:	11
Brew Date:	11/19/10	Collected (gal):	5.00
Rack Date:	12/04/10	Racked (gal):	4.75
Bottle Date:	12/11/10	Bottled (gal):	4.00

BJCP Style Guidelines	
Style:	American IPA
Code:	14B
OG:	1.056-1.075
FG:	1.010-1.018
IBU:	40.0-70.0
SRM:	6.0-15.0
ABV:	5.5-7.5%
CO2:	1.5-2.3

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	73%
Batch Size:	78%
Into Boiler:	84%
Into Fermenter:	59%

Yeast Strain	
Yeast Strain:	White Labs WLP001 (California Ale)
Type:	California Ale
Attenuation (%):	73-80%
Actual Attenuation (%):	76%
Fermentation Temp (F):	68-73F
Flocculation:	medium

Yeast Amounts	
Cell Count (billions):	283
Vials (White Labs/Wyeast):	2.4
Dry Yeast (g):	14
Starter Volume (mL):	3500
DME Required (oz):	12.25
Vials Required (w/ Starter):	1.0

ON BREW DAY	
Heat 5.12 gallons of strike water to 168F	
Add grain and mash at 152F for 60 minutes	
Mash-out with 2.66 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 5.5 gallons)	
Add 2.89 gallons at 189F to lauter tun and sparge	
Vorlauf and collect second runnings (approx. 2.89 gallons)	
Boil for a total of 90 minutes with the following hop schedule:	
1.00 oz. Simcoe @90 minute(s)	
0.25 oz. Simcoe @60 minute(s)	
0.25 oz. Columbus @60 minute(s)	
0.25 oz. Simcoe @30 minute(s)	
0.25 oz. Columbus @30 minute(s)	
0.75 oz. Simcoe @15 minute(s)	
0.75 oz. Columbus @15 minute(s)	
1.25 oz. Cascade @10 minute(s)	
0.5 oz. Simcoe @0 minute(s)	
0.5 oz. Columbus @0 minute(s)	

Summary	
Hopfully IPA	

Batch Size: 6.00 gal (8.39 gal preboil)	
Estimated OG: 1.068 SG (actual: 1.074 SG)	
Estimated FG: 1.016 SG (actual: 1.018 SG)	
Estimated IBUs: 90 (Tinseth; actual: 115)	
Estimated Color: 9 SRM (actual: 11 SRM)	
Brewhouse Efficiency: 73% (actual: 78%)	
Boil Time: 90 minutes	

Grains:
 14.00# Pale Malt (2-Row) US (88.89%)
 0.88# Carapils/Dextrine (5.56%)
 0.88# Caramel/Crystal 60L (5.56%)

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	14.00	1.036	0.061	2.0	88.89%
Carapils/Dextrine	0.88	1.033	0.004	2.0	5.56%
Caramel/Crystal 60L	0.88	1.034	0.004	60.0	5.56%

Brewing	
Batch Size (gal):	6.00
Total Grain Weight (lbs):	15.75
Grain Temperature (F):	68
Mash Ratio (qt/lb):	1.30
Mash/Lauter Deadspace (gal):	0.25
Total Water Needed (gal):	10.60
Desired Mash Temperature (F):	152
Strike Water (gal):	5.12
Strike Temperature (F):	168
Grain Absorption (gal):	1.97
Mash-out Temperature (F):	152
Mash-out Water (gal):	2.66

Gravity	
Potential OG:	1.094
OG:	1.073
OG Temperature (F):	63
Corrected OG:	1.074
SG at Racking:	1.022
SG Temperature (F):	70
Corrected SG:	1.023
FG:	1.017
FG Temperature (F):	71
Corrected FG:	1.018
Potential ABV (%):	9.0%
Actual ABV (%):	7.3%
IBU to Gravity Ratio:	1.56

Diacetyl Rest	
Target Fermentation Completion:	75%
Target SG for Diacetyl Rest:	1.031

Fermentation	
CO2 Released During Fermentation (g):	1040.50

Collections	
First Runnings (gal):	5.50
SG of First Runnings:	1.058
SG Temperature (F):	114
Corrected SG:	1.067
Second Runnings (gal):	2.50
SG of Second Runnings:	1.027
SG Temperature (F):	134
Corrected SG:	1.041
Estimated Preboil SG:	1.059
Preboil Volume (gal):	8.15
SG of Preboil Volume:	1.054
SG Temperature (F):	88
Corrected SG:	1.058

Carbonation	
CO2 Volume:	1.90
Bottling Temperature (F):	
Priming Sugar (oz):	
DME (oz):	
Forced Carbonation (lbs):	

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Simcoe	12.2%	1.00	90	31.9	11.43%
Simcoe	12.2%	0.25	60	7.5	2.86%
Columbus	14.5%	0.25	60	8.9	2.86%
Simcoe	12.2%	0.25	30	5.7	2.86%
Columbus	14.5%	0.25	30	6.8	2.86%
Simcoe	12.2%	0.75	15	11.1	8.57%
Columbus	14.5%	0.75	15	13.2	8.57%
Cascade	4.6%	1.25	10	5.1	14.29%
Simcoe	12.2%	0.50	0	0.0	5.71%
Columbus	14.5%	0.50	0	0.0	5.71%
Amarillo	8.6%	0.50	dry	0.0	5.71%
Cascade	4.6%	0.50	dry	0.0	5.71%
Centennial	9.1%	0.50	dry	0.0	5.71%
Columbus	14.5%	0.00	dry	0.0	0.00%
Simcoe	12.2%	0.50	dry	0.0	5.71%
Citra	12.0%	1.00	dry	0.0	11.43%

Notes
 First runnings refrac = 16.22 P = 1.067 SG
 Second runnings refrac = 10 P = 1.040 SG
 Preboil refrac = 14 P = 1.057 SG
 Collected refrac = 16.8 P = 1.069 SG
 New bunthead on new kettle, air was being pulled in so had to tilt kettle and fiddle.
 Screw evaporation!
 Substituted 1 oz Citra for Columbus (ran out) in the dry hop.
 12/11: Nice and bitter, great hop aroma; 7.3% ABV!
 I have to remember that whole hops absorb a lot of beer!
 12/13: Great fresh taste! Hop aroma is strong and 115 IBUs feels more like 95.

I get a slight sweetness that is not obnoxious since it's kept in line by the bitterness.
 This was a great brew, but I think I might want to lower the FG next time by mashing at 150.

Extra Variables	
12 oz. Bottles Required:	41
Primary Fermentation Temp. (F):	66
Secondary Fermentation Temp (F):	71

Yeast:
 White Labs WLP001 (California Ale) (California Ale)

Mash/Sparge Schedule:
 Single Infusion, 152F; Batch Sparge
 Mash for 60 min at 152F w/ 5.12 gal of water at 168F
 Mashout w/ 2.66 gal of water at 210F; hold for 10 min
 Batch sparge w/ 2.89 gal of water at 189F; hold for 10 min

Fermentation Schedule:
 Primary Fermentation: 15 days @66F
 Secondary Fermentation: 7 days @71F