

BREWSHEET v1.0 (2010-02-26)

Batch			BJCP Style Guideline			Efficiency	
Brew Name:	Pliny the Elder Clone		Style:	Imperial IPA		Brewhouse Efficiency:	72%
Estimated OG:	1.070	Actual OG: 1.069	Code:	14C		Efficiency (on Batch Size):	71%
Estimated FG:	1.016	Actual FG: 1.010	OG:	1.070-1.090		Efficiency into Boiler:	83%
Estimated IBU:	178.2	Actual IBU: 183.6	FG:	1.010-1.020		Efficiency into Fermenter:	69%
Estimated SRM:	8.1	Actual SRM: 8.2	IBU:	60.0-120.0			
Brew Date:	05/21/10	Collected: 5.40	SRM:	8.0-15.0			
Rack Date:	05/31/10	Racked: 5.40	ABV:	7.5-10.0+%			
Bottle Date:	06/14/10	Bottles: 51	CO2:	1.5-2.3			

Grain	Pounds	Potential	Color	% Bill
Pale Malt (2-Row) US	13.00	1.036	2.0	87.39%
Carapils/Dextrine	0.50	1.033	2.0	3.36%
Caramel/Crystal 60L	0.63	1.034	60.0	4.20%
Corn sugar (dextrose)	0.75	1.040	0.0	5.04%

Hop	Alpha %	Ounces	Boil Time	IBU
Columbus	13.2%	3.50	90	129.7
Columbus	13.2%	0.75	45	23.9
Simcoe	12.2%	1.00	30	24.6
Simcoe	12.2%	2.50	0	0.0
Centennial	9.1%	1.00	0	0.0
Columbus	13.2%	1.00	dry 12-14	0.0
Centennial	9.1%	1.00	dry 12-14	0.0
Simcoe	12.2%	1.00	dry 12-14	0.0
Columbus	13.2%	0.25	dry T-5	0.0
Centennial	9.1%	0.25	dry T-5	0.0
Simcoe	12.2%	0.25	dry T-5	0.0

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

Yeast Required	
Cell Count (billions):	265
Viats (White Labs/Wyeast):	2.3
Dry Yeast (g):	14
Starter Volume (mL):	3000
DME Required (oz)	10.50
Viats Required (w/ Starter):	1.1

User Variables	
Calories per Pint:	225
12 oz. Bottles Required:	56.4
DME for Carbonation (oz.):	4.72
Estimated Preboil SG:	1.055
Actual Attenuation (%):	85.34%
Bottle Top Code:	E

Gravity		Collections	
Potential OG:	1.097	First Runnings (gal):	5.40
OG:	1.067	SG of First Runnings:	1.050
OG Temperature (F):	75	SG Temperature (F):	138
Corrected OG:	1.069	Corrected SG:	1.065
SG at Racking:	1.012	Second Runnings (gal):	3.00
SG Temperature (F):	69	SG of Second Runnings:	1.020
Corrected SG:	1.013	SG Temperature (F):	142
FG:	1.009	Corrected SG:	1.036
FG Temperature (F):	69	Preboil Volume (gal):	8.40
Corrected FG:	1.010	SG of Preboil Volume:	1.033
Potential ABV:	9.2%	SG Temperature (F):	153
Actual ABV:	7.7%	Corrected SG:	1.053

Brewing			
Batch Size (gal):	5.50	Desired Sparge Temperature (F):	168
Total Grain Weight (lbs):	14.88	Sparge Water (gal):	3.09
Grain Temperature (F):	76	Sparge Water Temperature (F):	188
Mash Ratio (qts/lb):	1.25	Estimated Preboil Volume (gal):	8.20
Mash/Lauter Deadspace (gal):	0.25	Boil Time (min):	90
Total Water Needed (gal):	10.31	Evaporation Rate (%):	13%
Desired Mash Temperature (F):	148	Estimated Evaporation Loss (gal):	1.60
Strike Water (gal):	4.65	Trub Loss (gal):	1.10
Strike Temperature (F):	163	Volume Left in Kettle (gal):	0.00
Grain Absorption (gal):	1.86	Actual Evaporation Rate (%):	15%
Mash-out Temperature (F):	148	Actual Evaporation Loss (gal):	1.90
Mash-out Water (gal):	2.57		
Estimated First Runnings (gal):	5.11		

Carbonation	
CO2 Volume:	2.00
Bottling Temperature (F):	70
Priming Sugar (oz):	3.37
Forced Carbonation (lbs):	20.8

Inventory	
Bottles Remaining:	51
Gallons Remaining:	4.78
Date Checked:	06/14/10

Diacetyl Rest	
Target Fermentation Completion:	75%
Target SG for Diacetyl Rest:	1.029

BREW DAY

Single Infusion Mash (with Mash-out) and Batch Sparge Brew Schedule
Heat 4.65 gallons of mash water to 163F
Add grain and mash at 148F for 60 minutes
At T-40 to mash-out, heat 2.57 gallons of mash-out water on the stove to 210F
At T-25 to mash-out, heat 3.09 gallons of sparge water in the kettle to 188F
Mash-out with 2.57 gallons, mix and hold for 10 minutes
Vorlauf and collect first runnings (approx. 5.11 gallons)
Add 3.09 gallons to lautur tun, mix, hold for 10 minutes, and sparge
Vorlauf and collect second runnings (approx. 3.09 gallons)
Boil for a total of 90 minutes with the following hop schedule:
3.5 oz. Columbus @90 minute(s)
0.75 oz. Columbus @45 minute(s)
1 oz. Simcoe @30 minute(s)
2.5 oz. Simcoe @0 minute(s)
1 oz. Centennial @0 minute(s)

Notes
Crush crystal 60 separately and add near the end of the mash.
Didn't do above.
Stir in corn sugar once second runnings have been collected, prior to boil.
Did a 90 minute mash.
Will dissolve dextrose in water and pour in primary once fermentation starts to settle.
That should add .004 SG!
Higher evaporation rate explains higher OG, but it left space for 3L starter.
Next time, make starter 2 days before brewing.
Stir plate for 18-24 hours; refrigerator for 24 hours; decant; room temp; pitch
5/23: added dextrose
6/9: second dry hop.