

BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew		Collected (gal):		10.50	
Name:	Hopfully IPA	Racked (gal):			
Brew Date:	2012 May 11	Kegged/Bottled (gal):		9.90	
Rack Date:		Total Grain Weight (lbs):		31.00	
Keg/Bottle Date:	2012 June 13	Total Grain Weight (lbs):		31.00	
Estimated		Actual			
ABV (%):	7.1%	ABV (%):	7.8%		
OG (SG):	1.068	OG (SG):	1.068		
FG (SG):	1.014	FG (SG):	1.009		
IBU:	92.5	IBU:	100.7		
SRM:	8.7	SRM:	9.8		
IBU/Gravity Ratio:	1.36	IBU/Gravity Ratio:	1.47		

Grain	Pounds	Potential	SG Share	Color	% Bill
Northwestern Pale Ale malt	26.00	1.036	0.060	2.8	83.87%
British carastan	2.00	1.035	0.004	34.0	6.45%
Carapils/Dextrine	2.00	1.033	0.004	2.0	6.45%
Rice hulls	1.00	1.000	0.000	0.0	3.23%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Simcoe	L	1.75	hwh	11.9%	29.0	10.50%
Simcoe	L	0.50	100	11.9%	7.5	3.12%
Columbus	L	0.50	100	16.1%	10.1	3.12%
Simcoe	L	0.50	30	11.9%	5.3	3.12%
Columbus	L	0.50	30	16.1%	7.2	3.12%
Simcoe	L	1.50	15	12.8%	11.1	9.35%
Columbus	L	1.50	15	16.1%	13.9	9.35%
Cascade	L	2.30	10	8.8%	8.5	14.33%
Simcoe	L	1.00	0	13.7%	0.0	6.23%
Columbus	L	1.00	0	16.1%	0.0	6.23%
Amarillo	P	1.00	dry	6.9%	0.0	6.23%
Cascade	P	1.00	dry	5.5%	0.0	6.23%
Centennial	P	1.00	dry	9.9%	0.0	6.23%
Columbus	P	1.00	dry	14.5%	0.0	6.23%
Simcoe	P	1.00	dry	12.2%	0.0	6.23%

Design Notes	
Try holding back some of the second runnings until some boil off to hit target batch size.	
100 min hops were supposed to be 75 min hops.	

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	75
Total Grain Weight (lbs):	31.00
Mash	
Mash Time (min):	75
Desired Mash Temperature (F):	150
Strike Water (gal):	116.60
Strike Temperature (F):	165
Mash Ratio (qts/lb):	1.50
Grain Absorption (gal):	3.88
Mash Volume (gal):	14.08
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	7.58
First Runnings (gal):	7.80
First Runnings Gravity (Brix):	18.60
First Runnings Gravity (SG):	1.072
Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	7.12
Sparge Water Temperature (F):	175
Estimated Second Runnings (gal):	7.59
Second Runnings (gal):	6.75
Second Runnings Gravity (Brix):	8.50
Second Runnings Gravity (SG):	1.033
Estimated Preboil Volume (gal):	15.17
Estimated Preboil Gravity (Brix):	13.91
Preboil Volume (gal):	14.55
Preboil Gravity (Brix):	14.20
Preboil Gravity (SG):	1.055
Extraction Efficiency (%):	75%
Boil	
Boil Time (min):	115
Estimated Evaporation Loss (gal):	2.59
Hop Absorption (gal):	0.55
Volume Left in Kettle (gal):	-0.41
Actual Evaporation Rate (gal/hr):	1.51
Actual Evaporation Loss (gal):	2.89
Original Gravity (Brix):	17.62
Batch Size Efficiency (%):	70%
Actual Efficiency (%):	64%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	66
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	7
Secondary Fermentation Temperature (F):	66
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	35
Final Gravity (SG):	1.011
Temperature of Reading (F):	41
Corrected SG:	1.009
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	222
12 oz. Bottles Required:	101
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	1.90
Priming Sugar (oz):	
DME (oz):	
Forced Carbonation (lbs):	

System Variables	
Brewhouse Efficiency (%):	70%
Volume in Hoses (gal):	0.22
Volume in Wort Chiller (gal):	0.19
Volume in HERMS Coil (gal):	0.25
Mash/Lauter Tun Deadspace (gal):	0.14
Strike to Sparge Volume Ratio (%):	50%
Trub Loss (gal):	0.16
FWH IBU Factor (%):	10%
Mash Temperature Factor (F):	5
Sparge Temperature Factor (F):	3
Estimated Evaporation Rate (gal/hr):	1.35
Leaf Hop Absorption Ratio (qts/oz):	0.20
Pellet Hop Absorption Ratio (qts/oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	-0.001

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

Yeast Strain	
Yeast Strain:	Danstar Nottingham (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-85%
Actual Attenuation (%):	87%
Fermentation Temp (F):	57-70F
Flocculation:	high

Required Amounts	
Call Count (billions):	517
Vials (White Labs/WYeast):	
Dry Yeast (g):	25.9

Yeast Starter/Slurry	
Vials (White Labs/WYeast):	
Date Yeast Produced:	
Yeast Viability (%):	
Yeast Growth Rate:	
Yeast Inoculation Rate (million/ml):	
Starter Volume Required (ml):	
DME Required (oz):	
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	

User Variables	

Batch Scaling				
Desired OG:		Total Weight (lbs):		
Batch Size (gal):		Total Bill:		
Brewhouse Efficiency (%):				
Grain	Pounds	Potential	Color	% Bill

Poundage	
Goal (lbs):	26.00
Amount (lbs oz f_oz):	2 4.72
Amount (lbs oz f_oz):	0 11.11
Amount (lbs oz f_oz):	2 11.63
Amount (lbs oz f_oz):	2 10.08
Amount (lbs oz f_oz):	2 13.36
Amount (lbs oz f_oz):	2 13.01
Amount (lbs oz f_oz):	2 14.10
Amount (lbs oz f_oz):	2 14.07
Amount (lbs oz f_oz):	2 13.68
Amount (lbs oz f_oz):	2 14.38
Amount (lbs oz f_oz):	0 7.86
Amount (lbs oz f_oz):	0 0.00

Hydrometer Correction	
SG:	1.013
Temperature (F):	39
Corrected SG:	1.011

Gravity Calculator	
Brix:	
Specific Gravity:	
Degrees Plato:	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes	
All but 1.5 gal second runnings went in at the beginning.	
Added an extra 0.5 gal after hot break.	
Added the last 1 gal at T-60.	
1.060 at T-30 so extended boil by 15 mins.	
1.062 at T-30 (after adjustment) so extended boil by 10 mins.	
Collected 5.5 gal @ 18.08 (1.070 SG) in first fermenter.	
Collected 4.3 gal + 0.7 gal water @ 17.15 (1.067 SG) in second fermenter.	
Average is 17.615 (1.068 SG).	
5/26: First fermenter: 1.013 SG (7.4% ABV; 81% attenuation).	
Tastes like Hopfully!	
Second fermenter: 1.020 SG (6.2% ABV; 71% attenuation).	
A bit sweeter; roused the yeast.	
Dry hop in a few days once second fermenter drops a few points.	
5/31: First fermenter: 1.012 SG (7.6% ABV; 83% attenuation).	
Second fermenter: 1.015 SG (6.8% ABV; 77% attenuation).	
Dry hopped.	
6/8: cold crashed first fermenter.	
6/13: kegged first fermenter: at 1.009 SG (7.8% ABV; 87% attenuation).	
Cold crashed second fermenter.	
6/19: kegged second fermenter; at 1.011 SG (7.3% ABV; 83% attenuation).	
Looks like a slight pellicle on top but could be the hops.	
Beer is crystal clear!	