BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name:	Hopfully IPA		
Brew Date:	2012 February 19	Collected (gal):	9.10
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2012 March 13	Kegged/Bottled (gal):	9.00
Estimated		**Actual**	
ABV (%):	6.8%	ABV (%):	7.3%
OG (SG):	1.068	OG (SG):	1.069
FG (SG):	1.016	FG (SG):	1.013
IBU:	91.0	IBU:	99.4
SRM:	8.7	SRM:	9.3
IBU/Gravity Ratio:	1.33	IBU/Gravity Ratio:	1.44

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	fwh	11.9%	28.8	10.90%
Simcoe	L	0.50	75	11.9%	7.2	3.12%
Columbus	L	0.50	75	16.1%	9.8	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	11.9%	10.3	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	11.9%	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

Pitch yeast slurry from Overdose IPA.
Need 106ml.
Split half with Ryan.

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	63
Total Grain Weight (lbs):	31.00
Mash	
Mash Time (min):	75
Desired Mash Temperature (F):	150
Strike Water (gal):	11.63
Strike Temperature (F):	169
Mash Ratio (qts/lb):	1.50
Grain Absorption (gal):	3.88
Mash Volume (gal):	14.11
Mash-out Temperature (F):	150
Estimated First Runnings (gal):	7.61
First Runnings (gal):	7.30
First Runnings Gravity (Brix):	17.06
First Runnings Gravity (SG):	1.066
Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	7.14
Sparge Water Temperature (F):	189
Estimated Second Runnings (gal):	7.61
Second Runnings (gal):	7.54
Second Runnings Gravity (Brix):	8.03
Second Runnings Gravity (SG):	1.031
Estimated Preboil Volume (gal):	15.22
Estimated Preboil Gravity (Brix):	12.47
Preboil Volume (gal):	14.84
Preboil Gravity (Brix):	13.40
Preboil Gravity (SG):	1.052
Extraction Efficiency (%):	72%
Boil	
Boil Time (min):	105
Estimated Evaporation Loss (gal):	2.63
Hop Absorption (gal):	0.55
Volume Left in Kettle (gal):	0.90
Actual Evaporation Rate (gal/hr):	1.90
Actual Evaporation Loss (gal):	3.33
Original Gravity (Brix):	17.80
Batch Size Efficiency (%):	71%
Actual Efficiency (%):	64%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	65
Gravity After Primary Fermentation (SG):	1.014
Temperature of Reading (F):	69
Corrected SG:	1.014
Secondary Fermentation (days):	7
Secondary Fermentation Temperature (F):	68
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	40
Final Gravity (SG):	1.015
Temperature of Reading (F):	52
Corrected SG:	1.013
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	227
12 oz. Bottles Required:	92
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%
Strike Temperature Factor (F):	7
Sparge Temperature Factor (F):	4
Estimated Evaporation Rate (gal/hr):	1.50
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:	White Labs WLP001 (California Ale)
Type:	California Ale
Attenuation (%):	73-80%
Actual Attenuation (%):	81%
Fermentation Temp (F):	68-73F
Flocculation:	medium

Required Amounts	
Cell Count (billions):	517
Vials (White Labs/Wyeast):	5.2
Dry Yeast (g):	25.9
Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	
Date Yeast Produced:	2012 February 18
Yeast Viability (%):	99%
Yeast Growth Rate:	
Yeast Innoculation 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):	226

User Variables	

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

Poundage		
Goal (lbs):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
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Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Needed (lbs | oz.f_oz):		

Hydrometer Correction		
SG:		
Temperature (F):		
Corrected SG:		

Gravity Calculator			
Brix:			
Specific Gravity:			
Degrees Plato:			

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

2/19: did 2 separate mashes; mine was constant at 150F, Ryan's started at 148F and went down to about 138F.
Did mashout on Ryan's at 60 min and mine at 75 min.
Ryan's first runnings was 2.6 gal @ 17.5 Brix (1.068 SG).
My first runnings was 4.5 gal @ 16.8 Brix (1.065 SG).
Ryan's second runnings was 3.84 gal @ 9.6 Brix (1.037 SG).
My second runnings was 3.7 gal @ 6.4 Brix (1.025 SG).
14.9 Brix (1.058 SG) at 60 min.
15.4 Brix (1.060 SG) at 25 min.
Increased boil time by 15 min.
Leaf hops clogged manifold on Ryan's kettle and my mash tun.
So hops stayed in warm beer for a good hour before all was collected.
Refrac reading for OG was 1.061 SG, but hydrometer reading (taken a few hours later) was 1.069.
I think I will use the hydrometer directly in the collected wort next time.
Used one mason jar of washed yeast from Overdose IPA; smelled fine; hope it stays that way!
It seems that hop absorption was a tad higher than estimated; of course, this could have been due to transferring the wort from Ryan's kettle to my mash tun and also because we removed hops to try to clear the clog (we might not have drained all the liquid out in our hurry to collect the wort).
3/3: 1.014 SG; nice aroma with slight citrus hint; flavor is very similar and not too bitter.
Fermentation temps started at 65F and were mostly there during active fermentation; then ramped up on its own (and due to higher ambient temps) to about 72F.
3/4: dry hopped.
3/8: 1.013 SG; 7.3% ABV.
3/10: cold crashed.
3/13: kegged.
Great aroma and flavor; a bit (very slight) amount of that "creaminess" that I can only assume for now is Centennial.
4/6: probably one of the best versions of this I have ever done; great aroma and flavor.
No "creaminess" whatsoever.