BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name:	Stiff Upper Lip Pale Ale		
Brew Date:	2014 February 16	Collected (gal):	11.00
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2014 March 12	Kegged/Bottled (gal):	10.00
Estimated		**Actual**	
ABV (%):	4.4%	ABV (%):	5.0%
OG (SG):	1.045	OG (SG):	1.044
FG (SG):	1.012	FG (SG):	1.006
IBU:	36.4	IBU:	36.8
SRM:	8.6	SRM:	8.6
IBU/Gravity Ratio:	0.81	IBU/Gravity Ratio:	0.83

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	14.75	1.036	0.034	2.0	74.57%
Vienna Malt	2.75	1.036	0.006	3.5	13.90%
British carastan	1.50	1.035	0.003	34.0	7.58%
Caramel/Crystal 90L	0.50	1.034	0.001	90.0	2.53%
Victory Malt	0.28	1.034	0.001	25.0	1.42%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Cascade	P	1.50	fwh	6.4%	17.4	17.14%
Cascade	P	1.00	60	6.4%	10.5	11.43%
Cascade	P	2.25	10	6.4%	8.6	25.71%
Nelson Sauvin (NZ)	P	0.85	0	11.2%	0.0	9.71%
Amarillo	P	3.15	dry	8.7%	0.0	36.00%

Design Notes

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	67
Total Grain Weight (lbs):	19.78
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	152
Strike Water (gal):	9.33
Strike Temperature (F):	168
Mash Ratio (qts/lb):	1.89
Grain Absorption (gal):	2.47
Mash Volume (gal):	10.91
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	6.72
First Runnings (gal):	6.70
First Runnings Gravity (Brix):	14.05
First Runnings Gravity (SG):	1.055
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	6.25
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	6.72
Second Runnings (gal):	6.76
Second Runnings Gravity (Brix):	6.20
Second Runnings Gravity (SG):	1.024
Estimated Preboil Volume (gal):	13.43
Estimated Preboil Gravity (Brix):	10.11
Preboil Volume (gal):	13.46
Preboil Gravity (Brix):	10.80
Preboil Gravity (SG):	1.042
Extraction Efficiency (%):	80%
Boil	
Boil Time (min):	60
Estimated Evaporation Loss (gal):	1.25
Hop Absorption (gal):	0.14
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.28
Actual Evaporation Loss (gal):	1.28
Original Gravity (Brix):	11.38
Batch Size Efficiency (%):	69%
Actual Efficiency (%):	69%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	66
Gravity After Primary Fermentation (SG):	1.011
Temperature of Reading (F):	62
Corrected SG:	1.011
Secondary Fermentation (days):	7
Secondary Fermentation Temperature (F):	72
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.007
Temperature of Reading (F):	47
Corrected SG:	1.006
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	143
12 oz. Bottles Required:	102
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	2.45
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):	1.25
Leaf Hop Absorption Ratio (qts/oz):	0.40
Pellet Hop Absorption Ratio (qts/ oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	-0.001

BJCP Style Guidelines	
Style:	American Pale Ale
Code:	10A
OG:	1.045-1.060
FG:	1.010-1.015
IBU:	30.0-45.0
SRM:	5.0-14.0
ABV:	4.5-6.0%
CO2:	2.2-2.7

Yeast Strain	
Yeast Strain:	Danstar American West Coast (Dry Ale)
Type:	Dry Ale
Attenuation (%):	70-78%
Actual Attenuation (%):	87%
Fermentation Temp (F):	60-70F
Flocculation:	high

Required Amounts	
Cell Count (billions):	349
Vials (White Labs/Wyeast):	
Dry Yeast (g):	17.5

Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	
Date Yeast Produced:	
Yeast Viability (%):	
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):	

User Variables

Batch Scaling				
Desired OG:	1.045	Total Weight (lbs):		19.71
Batch Size (gal):	11.00	Total Bill:		100.00%
Brewhouse Efficiency (%):	70%			
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Pale Malt (2-Row) US	14.78	1.036	2.0	75.00%
Vienna Malt	2.96	1.036	3.5	15.00%
British carastan	1.58	1.035	34.0	8.00%
Caramel/Crystal 90L	0.39	1.034	90.0	2.00%
Victory Malt		1.034	25.0	

Poundage		
Goal (lbs):		
Amount (lbs | oz.f_oz):		
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:	1.045	
Temperature (F):	60	
Corrected SG:	1.044	

Gravity Calculator			
Brix:	11.50	11.38	
Specific Gravity:	1.045	1.044	
Degrees Plato:	11.06	10.95	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

FWH added while recirculating the sparge.
3/4: dry hopped (first batch got 0.85oz Nelson Sauvin and 1.15oz Amarillo; second batch got 2oz Amarillo).
First batch is at 1.010 SG; great aroma an flavor; slight citrus with hints of apricot and orange.
A bit dry; bitterness spot on!
Second batch is at 1.012 SG; same profile as the first batch.
3/12: kegged.
First batch: 1.006 FG (5.0% ABV)! Pretty clear, citrus aroma with pineapple and passion fruit.
Flavor is better than aroma; quite citrusy with hints of orange and lemon; dry; nice bitterness.
Second batch: 1.006 FG (5.0% ABV). Aroma is similar but slightly better with mango.
Flavor is also similar but perhaps just a tad less bold; bitterness is maybe slightly less pronounced.