BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Soul Stripper IPA		
Brew Date:	2019 February 24	Collected (gal):	10.50
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2019 August 24	Kegged/Bottled (gal):	10.00
Estimated		**Actual**	
ABV (%):	7.2%	ABV (%):	7.8%
OG (SG):	1.069	OG (SG):	1.066
FG (SG):	1.014	FG (SG):	1.006
IBU:	70.5	IBU:	75.7
SRM:	12.5	SRM:	12.6
IBU/Gravity Ratio:	1.03	IBU/Gravity Ratio:	1.15

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	26.00	1.036	0.060	2.0	86.67%
Caramel/Crystal 90L	2.00	1.034	0.004	90.0	6.67%
Red Wheat	1.00	1.039	0.002	1.5	3.33%
Munich Malt 10L	1.00	1.035	0.002	10.0	3.33%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Centennial	L	2.00	fwh	10.8%	27.5	8.03%
Cascade	P	2.40	30	4.7%	11.5	9.64%
Centennial	L	1.30	30	10.8%	12.5	5.22%
Cascade	P	4.00	10	4.7%	9.1	16.06%
Columbus	P	1.60	10	12.9%	10.0	6.43%
Cascade	P	2.00	0	4.7%	0.0	8.03%
Columbus	P	1.60	0	12.9%	0.0	6.43%
Cascade	P	6.00	dry	4.7%	0.0	24.10%
Columbus	P	4.00	dry	12.9%	0.0	16.06%

Design Notes

Using RO water; so at dough-in, add:
11.0 ml lactic acid (88%)
9.2 g CaSO4 (calcium sulfate/gypsum)
4.7 g CaCl2 (calcium chloride)
8.0 g MgSO4 (magnesium sulfate/epsom salt)
4.45 g Ca(OH)2 (calcium hydroxide/slaked lime)
3.7 g NaHCO3 (baking soda)
At boil, add:
5.5 g CaSO4 (calcium sulfate/gypsum)
2.8 g CaCl2 (calcium chloride)
4.8 g MgSO4 (magnesium sulfate/epsom salt)
2.7 g Ca(OH)2 (calcium hydroxide/slaked lime)
2.2 g NaHCO3 (baking soda)
Target is 5.4 mash pH, 140 ppm calcium, 18 ppm magnesium, 25 ppm sodium, 55 ppm chloride, 200 ppm sulfate

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	63
Total Grain Weight (lbs):	30.00
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	152
Strike Water (gal):	10.91
Strike Temperature (F):	171
Mash Ratio (qts/lb):	1.45
Grain Absorption (gal):	3.75
Mash Volume (gal):	13.31
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	7.02
First Runnings (gal):	7.75
First Runnings Gravity (Brix):	18.20
First Runnings Gravity (SG):	1.071
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	6.55
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	7.02
Second Runnings (gal):	5.75
Second Runnings Gravity (Brix):	9.15
Second Runnings Gravity (SG):	1.036
Estimated Preboil Volume (gal):	14.03
Estimated Preboil Gravity (Brix):	14.35
Preboil Volume (gal):	13.50
Preboil Gravity (Brix):	15.00
Preboil Gravity (SG):	1.058
Extraction Efficiency (%):	73%
Boil	
Boil Time (min):	60
Estimated Evaporation Loss (gal):	1.37
Hop Absorption (gal):	0.62
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.36
Actual Evaporation Loss (gal):	1.36
Original Gravity (Brix):	16.98
Batch Size Efficiency (%):	67%
Actual Efficiency (%):	64%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	62
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	4
Secondary Fermentation Temperature (F):	70
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.006
Temperature of Reading (F):	44
Corrected SG:	1.006
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	213
12 oz. Bottles Required:	102
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):	1.37
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 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 (%):	91%
Fermentation Temp (F):	57-70F
Flocculation:	high

Required Amounts	
Cell Count (billions):	519
Vials (White Labs/Wyeast):	
Dry Yeast (g):	26.0

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:		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):		
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):		
Needed (lbs | oz.f_oz):	26	0.00

Hydrometer Correction	
SG:	1.065
Temperature (F):	62
Corrected SG:	1.066

Gravity Calculator			
Brix:	15.80	16.98	
Specific Gravity:	1.061	1.066	
Degrees Plato:	14.96	16.01	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

8/24: maybe it picked up something crashing for so long; also didn't top up airlocks.