BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Whole Lotta Rosie		
Brew Date:	2018 September 3	Collected (gal):	5.50
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2018 September 30	Kegged/Bottled (gal):	5.00
Estimated		**Actual**	
ABV (%):	4.0%	ABV (%):	4.3%
OG (SG):	1.038	OG (SG):	1.040
FG (SG):	1.008	FG (SG):	1.007
IBU:	24.3	IBU:	23.8
SRM:	4.2	SRM:	4.2
IBU/Gravity Ratio:	0.64	IBU/Gravity Ratio:	0.59

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	7.50	1.036	0.034	2.0	90.91%
Munich Malt 10L	0.56	1.035	0.002	10.0	6.74%
Caramel/Crystal 20L	0.19	1.035	0.001	20.0	2.35%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Perle (GR)	P	1.00	70	6.7%	24.3	100.00%

Design Notes

Add 6 c hibiscus calyces with 15 min left in boil.

Using RO water; so at dough-in, add:
2.1 ml lactic acid (88%)
3.95 g CaSO4 (calcium sulfate/gypsum)
1.975 g CaCl2 (calcium chloride)
1.7 g MgSO4 (magnesium sulfate/epsom salt)
0.7 g NaHCO3 (baking soda)
At boil, add:
2.7 g CaSO4 (calcium sulfate/gypsum)
1.3 g CaCl2 (calcium chloride)
1.1 g MgSO4 (magnesium sulfate/epsom salt)
0.5 g NaHCO3 (baking soda)
Target is 5.4 mash pH, 75 ppm calcium, 5 ppm magnesium, 10 ppm sodium, 50 ppm chloride, 150 ppm sulfate

Batch Variables and Calculations	
Batch Size (gal):	5.50
Grain Temperature (F):	84
Total Grain Weight (lbs):	8.25
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	150
Strike Water (gal):	5.16
Strike Temperature (F):	162
Mash Ratio (qts/lb):	2.50
Grain Absorption (gal):	1.03
Mash Volume (gal):	5.82
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	3.99
First Runnings (gal):	3.95
First Runnings Gravity (Brix):	12.20
First Runnings Gravity (SG):	1.047
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	3.51
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	3.98
Second Runnings (gal):	3.80
Second Runnings Gravity (Brix):	4.70
Second Runnings Gravity (SG):	1.018
Estimated Preboil Volume (gal):	7.97
Estimated Preboil Gravity (Brix):	8.52
Preboil Volume (gal):	7.75
Preboil Gravity (Brix):	8.00
Preboil Gravity (SG):	1.031
Extraction Efficiency (%):	81%
Boil	
Boil Time (min):	70
Estimated Evaporation Loss (gal):	1.63
Hop Absorption (gal):	0.03
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.21
Actual Evaporation Loss (gal):	1.41
Original Gravity (Brix):	10.32
Batch Size Efficiency (%):	74%
Actual Efficiency (%):	74%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	64
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	3
Secondary Fermentation Temperature (F):	32
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	
Tertiary Fermentation Temperature (F):	
Final Gravity (SG):	1.007
Temperature of Reading (F):	43
Corrected SG:	1.007
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	131
12 oz. Bottles Required:	51
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):	1.40
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:	Blonde Ale
Code:	6B
OG:	1.038-1.054
FG:	1.008-1.013
IBU:	15.0-28.0
SRM:	3.0-6.0
ABV:	3.8-5.5%
CO2:	2.3-2.6

Yeast Strain	
Yeast Strain:	Danstar Nottingham (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-85%
Actual Attenuation (%):	82%
Fermentation Temp (F):	57-70F
Flocculation:	high

Required Amounts	
Cell Count (billions):	147
Vials (White Labs/Wyeast):	
Dry Yeast (g):	7.4
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):		
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):		
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:	1.037	
Temperature (F):	77	
Corrected SG:	1.040	

Gravity Calculator			
Brix:	9.70	10.32	
Specific Gravity:	1.038	1.040	
Degrees Plato:	9.40	9.98	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

9/3: mash-in at 153F; pH perhaps a tad high (~5.9); let temp drop to 150F (took ~10 min)
Increased boil 10 min to hit volume and OG
9/30: kegged; very clear, great light aroma, can definitely detect the hibiscus; light and tart flavor is refreshing; light hibiscus flavor; great dry finish.