BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Loconut		
Brew Date:	2018 August 19	Collected (gal):	5.50
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2018 October 6	Kegged/Bottled (gal):	5.00
Estimated		**Actual**	
ABV (%):	6.8%	ABV (%):	5.9%
OG (SG):	1.065	OG (SG):	1.063
FG (SG):	1.013	FG (SG):	1.018
IBU:	36.8	IBU:	37.4
SRM:	48.5	SRM:	48.5
IBU/Gravity Ratio:	0.56	IBU/Gravity Ratio:	0.59

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	9.00	1.036	0.041	2.0	61.02%
Munich Malt 10L	2.25	1.035	0.010	10.0	15.25%
Caramel/Crystal 90L	1.00	1.034	0.004	90.0	6.78%
Caramel/Crystal 150L	1.00	1.033	0.004	150.0	6.78%
Chocolate Malt	0.75	1.028	0.003	350.0	5.08%
Roasted barley	0.75	1.028	0.003	450.0	5.08%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Perle (GR)	P	2.00	60	6.7%	36.8	100.00%

Design Notes

Using RO water; so at dough-in, add:
3.2 ml lactic acid (88%)
4.25 g CaSO4 (calcium sulfate/gypsum)
3.65 g CaCl2 (calcium chloride)
4.7 g MgSO4 (magnesium sulfate/epsom salt)
8.9 g NaHCO3 (baking soda)
At boil, add:
2.5 g CaSO4 (calcium sulfate/gypsum)
2.1 g CaCl2 (calcium chloride)
2.7 g MgSO4 (magnesium sulfate/epsom salt)
5.2 g NaHCO3 (baking soda)
Target is 5.4 mash pH, 80 ppm calcium, 20 ppm magnesium, 110 ppm sodium, 80 ppm chloride, 190 ppm sulfate

Test and add coffee and coconut extracts/flavorings at kegging time.

Batch Variables and Calculations	
Batch Size (gal):	5.50
Grain Temperature (F):	87
Total Grain Weight (lbs):	14.75
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	155
Strike Water (gal):	5.85
Strike Temperature (F):	171
Mash Ratio (qts/lb):	1.59
Grain Absorption (gal):	1.84
Mash Volume (gal):	7.03
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	3.87
First Runnings (gal):	4.10
First Runnings Gravity (Brix):	18.60
First Runnings Gravity (SG):	1.072
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	3.40
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	3.87
Second Runnings (gal):	3.85
Second Runnings Gravity (Brix):	8.00
Second Runnings Gravity (SG):	1.031
Estimated Preboil Volume (gal):	7.74
Estimated Preboil Gravity (Brix):	13.47
Preboil Volume (gal):	7.95
Preboil Gravity (Brix):	13.20
Preboil Gravity (SG):	1.051
Extraction Efficiency (%):	80%
Boil	
Boil Time (min):	60
Estimated Evaporation Loss (gal):	1.38
Hop Absorption (gal):	0.05
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.59
Actual Evaporation Loss (gal):	1.59
Original Gravity (Brix):	16.29
Batch Size Efficiency (%):	68%
Actual Efficiency (%):	68%
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):	1.018
Temperature of Reading (F):	43
Corrected SG:	1.018
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	211
12 oz. Bottles Required:	51
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	2.15
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):	1.38
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:	Robust Porter
Code:	12B
OG:	1.048-1.065
FG:	1.012-1.016
IBU:	25.0-50.0
SRM:	22.0-35.0
ABV:	4.8-6.0%
CO2:	1.8-2.5

Yeast Strain	
Yeast Strain:	Danstar Nottingham (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-85%
Actual Attenuation (%):	71%
Fermentation Temp (F):	57-70F
Flocculation:	high
Required Amounts	
Cell Count (billions):	247
Vials (White Labs/Wyeast):	
Dry Yeast (g):	12.4
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:	1.065	Total Weight (lbs):		14.73
Batch Size (gal):	5.50	Total Bill:		100.00%
Brewhouse Efficiency (%):	70%			
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Pale Malt (2-Row) US	8.84	1.036	2.0	60.00%
Munich Malt 10L	2.21	1.035	10.0	15.00%
Caramel/Crystal 90L	1.10	1.034	90.0	7.50%
Caramel/Crystal 150L	1.10	1.033	150.0	7.50%
Chocolate Malt	0.74	1.028	350.0	5.00%
Roasted barley	0.74	1.028	450.0	5.00%

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):		
Needed (lbs | oz.f_oz):		

Hydrometer Correction		
SG:	1.060	
Temperature (F):	78	
Corrected SG:	1.063	

Gravity Calculator			
Brix:		16.29	
Specific Gravity:		1.063	
Degrees Plato:		15.40	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

8/19: mash pH is dead on (with strips).
10/6: kegged; aroma and flavor are spot on for a porter; clean, not sweet, slight roast. Will carbonate and add flavorings later.

10/14: added LorAnn coconut and coffee extracts; added the entire dram of coconut extract and ~80% of the coffee extract.
10/19: a hit at ARToberfest; next time, reduce the coconut by ~30%; it was more potent a few days after adding the coconut extract