BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name:	Dos Testes		
Brew Date:	2014 July 5	Collected (gal):	10.60
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2014 September 7	Kegged/Bottled (gal):	10.00
Estimated		**Actual**	
ABV (%):	3.8%	ABV (%):	4.5%
OG (SG):	1.040	OG (SG):	1.040
FG (SG):	1.010	FG (SG):	1.006
IBU:	15.9	IBU:	16.4
SRM:	3.0	SRM:	3.1
IBU/Gravity Ratio:	0.40	IBU/Gravity Ratio:	0.41

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	12.00	1.036	0.027	2.0	71.64%
Pilsner (2-Row) Germany	1.75	1.037	0.004	2.0	10.45%
Corn sugar (dextrose)	0.75	1.040	**0.003**	0.0	4.48%
Flaked Corn	2.25	1.037	0.005	1.3	13.43%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Saaz (CZ)	P	1.00	75	3.5%	6.3	25.00%
Saaz (CZ)	P	2.00	25	3.5%	8.4	50.00%
Saaz (CZ)	P	1.00	5	3.5%	1.2	25.00%

Design Notes

Add corn sugar at beginning of boil.

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	75
Total Grain Weight (lbs):	16.75
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	150
Strike Water (gal):	9.06
Strike Temperature (F):	164
Mash Ratio (qts/lb):	2.16
Grain Absorption (gal):	2.09
Mash Volume (gal):	10.40
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	6.83
First Runnings (gal):	6.83
First Runnings Gravity (Brix):	12.00
First Runnings Gravity (SG):	1.047
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	6.35
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	6.82
Second Runnings (gal):	6.82
Second Runnings Gravity (Brix):	5.80
Second Runnings Gravity (SG):	1.023
Estimated Preboil Volume (gal):	13.64
Estimated Preboil Gravity (Brix):	8.90
Preboil Volume (gal):	13.65
Preboil Gravity (Brix):	8.70
Preboil Gravity (SG):	1.034
Extraction Efficiency (%):	76%
Boil	
Boil Time (min):	75
Estimated Evaporation Loss (gal):	1.50
Hop Absorption (gal):	0.10
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.54
Actual Evaporation Loss (gal):	1.93
Original Gravity (Brix):	10.38
Batch Size Efficiency (%):	73%
Actual Efficiency (%):	70%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	52
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	2
Secondary Fermentation Temperature (F):	63
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	28
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.008
Temperature of Reading (F):	42
Corrected SG:	1.006
Target Fermentation for Diacetyl Rest (%):	75%
Target Gravity for Diacetyl Rest (SG):	1.018
Calories per Pint:	131
12 oz. Bottles Required:	102
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	2.60
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):	1.20
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:	Lite American Lager
Code:	1A
OG:	1.028-1.040
FG:	0.998-1.008
IBU:	8.0-12.0
SRM:	2.0-3.0
ABV:	2.8-4.2%
CO2:	2.5-2.7

Yeast Strain	
Yeast Strain:	White Labs WLP940 (Mexican Lager)
Type:	Mexican Lager
Attenuation (%):	70-78%
Actual Attenuation (%):	85%
Fermentation Temp (F):	50-55F
Flocculation:	medium

Required Amounts	
Cell Count (billions):	617
Vials (White Labs/Wyeast):	16.4
Dry Yeast (g):	30.9
Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	4
Date Yeast Produced:	2014 April 1
Yeast Viability (%):	38%
Yeast Growth Rate:	4.09
Yeast Innoculation Rate (million/ml):	25.89
Starter Volume Required (ml);	5826
DME Required (oz):	18.94
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	831

User Variables	

Batch Scaling			
Desired OG:	1.040	Total Weight (lbs):	16.66
Batch Size (gal):	11.00	Total Bill:	100.00%
Brewhouse Efficiency (%):	70%		
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Pale Malt (2-Row) US	12.02	1.036	2.0	70.00%
Pilsner (2-Row) Germany	1.72	1.037	2.0	10.00%
Corn sugar (dextrose)	**1.20**	1.040	0.0	10.00%
Flaked Corn	1.72	1.037	1.3	10.00%

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

Hydrometer Correction		
SG:	1.039	
Temperature (F):	78	
Corrected SG:	1.040	

Gravity Calculator			
Brix:		10.38	
Specific Gravity:		1.040	
Degrees Plato:		10.03	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

7/2: did a 4500mL starter instead of 5600mL (not enough DME).
9/7: first batch is 1.006 FG (4.5% ABV)
Second batch is the same FG, aroma, and flavor
Aroma is slight corn and malt; flavor is crisp, clean, slightly malty, with corn
Turned out quite nice!