

BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name: Mild Mannered Ale			
Brew Date:	2014 May 4	Collected (gal):	11.00
Rack Date:	2014 July 3	Racked (gal):	
		Kegeged/Bottled (gal):	10.00
Estimated		Actual	
ABV (%):	3.9%	ABV (%):	3.3%
OG (SG):	1.037	OG (SG):	1.037
FG (SG):	1.007	FG (SG):	1.011
IBU:	20.4	IBU:	20.0
SRM:	20.0	SRM:	20.0
IBU/Gravity Ratio:	0.55	IBU/Gravity Ratio:	0.55

Grain	Pounds	Potential	SG Share	Color	% Bill
Maris Otter Malt	11.88	1.038	0.029	4.0	75.00%
Caramel/Crystal 60L	3.17	1.034	0.007	60.0	20.01%
Chocolate Malt	0.79	1.028	0.001	350.0	4.99%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Kent Golding	L	1.75	45	5.1%	12.6	46.67%
Kent Golding	L	2.00	15	5.1%	7.8	53.33%

Design Notes	

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	76
Total Grain Weight (lbs):	15.84
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	158
Strike Water (gal):	9.19
Strike Temperature (F):	172
Mash Ratio (qts/lb):	2.32
Grain Absorption (gal):	1.98
Mash Volume (gal):	10.46
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	7.07
First Runnings (gal):	7.20
First Runnings Gravity (Brix):	13.00
First Runnings Gravity (SG):	1.050
Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	6.60
Sparge Water Temperature (F):	175
Estimated Second Runnings (gal):	7.07
Second Runnings (gal):	7.30
Second Runnings Gravity (Brix):	4.35
Second Runnings Gravity (SG):	1.017
Estimated Preboil Volume (gal):	14.14
Estimated Preboil Gravity (Brix):	8.85
Preboil Volume (gal):	14.50
Preboil Gravity (Brix):	9.05
Preboil Gravity (SG):	1.035
Extraction Efficiency (%):	88%
Boil	
Boil Time (min):	90
Estimated Evaporation Loss (gal):	1.73
Hop Absorption (gal):	0.38
Volume Left in Kettle (gal):	0.25
Actual Evaporation Rate (gal/hr):	1.22
Actual Evaporation Loss (gal):	1.83
Original Gravity (Brix):	9.42
Batch Size Efficiency (%):	69%
Actual Efficiency (%):	71%
Fermentation	
Primary Fermentation (days):	3
Primary Fermentation Temperature (F):	65
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	7
Secondary Fermentation Temperature (F):	68
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.013
Temperature of Reading (F):	41
Corrected SG:	1.011
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	122
12 oz. Bottles Required:	102
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	1.65
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):	1.15
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:	Mild
Code:	11A
OG:	1.030-1.038
FG:	1.008-1.013
IBU:	10.0-25.0
SRM:	12.0-25.0
ABV:	2.8-4.5%
CO2:	1.3-2.0

Yeast Strain	
Yeast Strain:	Danstar Nottingham (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-85%
Actual Attenuation (%):	69%
Fermentation Temp (F):	57-70F
Flocculation:	high

Required Amounts	
Cell Count (billions):	289
Vials (White Labs/Wyeast):	
Dry Yeast (g):	14.5

Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	
Date Yeast Produced:	
Yeast Viability (%):	
Yeast Growth Rate:	
Yeast Inoculation 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:	1.037	Total Weight (lbs):	15.84		
Batch Size (gal):	11.00	Total Bill:	100.00%		
Brewhouse Efficiency (%):	70%				
Grain		Pounds	Potential	Color	% Bill
Maris Otter Malt	11.88	1.038	4.0	75.00%	
Caramel/Crystal 60L	3.17	1.034	60.0	20.00%	
Chocolate Malt	0.79	1.028	350.0	5.00%	

Poundage		
Goal (lbs):	11.88	
Amount (lbs oz f. oz):	2	5.46
Amount (lbs oz f. oz):	2	3.24
Amount (lbs oz f. oz):	2	1.47
Amount (lbs oz f. oz):	2	5.53
Amount (lbs oz f. oz):	2	3.94
Amount (lbs oz f. oz):		
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Amount (lbs oz f. oz):		
Needed (lbs oz f. oz):	0	10.44

Hydrometer Correction	
SG:	1.036
Temperature (F):	71
Corrected SG:	1.036

Gravity Calculator		
Brix:	9.50	9.36
Specific Gravity:	1.037	1.036
Degrees Plato:	9.21	9.08

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes	
5/4: added second runnings in 3 batches (to keep volume low during hot break)	
Initially added 12.75 gal	
10 min after start of boil added 1 gal (total now 13.75 gal); gravity 1.036 SG	
15 min after start of boil added 0.75 gal (total now 14.5 gal - preboil target); gravity 1.035 SG	
After first hop addition (@T-45), gravity 1.036 SG.	
Reduced boil time from 90 min to 80 min (@T-18 min gravity 1.037 SG); volume OK	
So 45 min hops were at 35 min (plus 10 min whirlpool)	
15 min hops went in at 5 min (plus 10 min whirlpool)	
Bitterness should be good; aroma/flavor should be good	
7/3: First batch is 1.0135@40 = 1.012 FG (3.3% ABV).	
Great aroma of roast and chocolate; flavor is dry with a hint of chocolate that fades to roast.	
Second batch is 1.013@41 = 1.011 FG (3.3% ABV).	
Aroma and flavor is identical to the first batch; same with dryness.	