

BREWSHEET v2.1 (2011-01-04)

Batch			
Brew Name:	Rocktoberfest		
Bottle Top Code:	Calories per Pint:		184
Estimated OG:	1.055	Actual OG:	1.055
Estimated FG:	1.013	Actual FG:	1.015
Estimated IBU:	25	Actual IBU:	25
Estimated SRM:	10	Actual SRM:	10
Brew Date:	08/30/11	Collected (gal):	5.00
Rack Date:	09/13/11	Racked (gal):	5.00
Bottle Date:	10/09/11	Bottled (gal):	5.00

BJCP Style Guidelines	
Style:	Oktoberfest/Märzen
Code:	3B
OG:	1.050-1.057
FG:	1.012-1.016
IBU:	20.0-28.0
SRM:	7.0-14.0
ABV:	4.8-5.7%
CO2:	2.6-2.7

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	73%
Batch Size:	73%
Into Boiler:	84%
Into Fermenter:	73%

Yeast Strain	
Yeast Strain:	White Labs WLP830 (German Lager)
Type:	German Lager
Attenuation (%):	74-79%
Actual Attenuation (%):	72%
Fermentation Temp (F):	50-55F
Flocculation:	medium

Yeast Amounts	
Cell Count (billions):	422
Vials (White Labs/Wyeast):	3.6
Dry Yeast (g):	21
Starter Volume (mL):	2500
DME Required (oz)	8.75
Vials Required (w/ Starter):	2.1

ON BREW DAY	
Heat 4.41 gallons of strike water to 165F	
Add grain and mash at 151F for 60 minutes	
Mash-out with 2.37 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 5.06 gallons)	
Add 3.74 gallons at 183F to lautur tun and sparge	
Vorlauf and collect second runnings (approx. 3.74 gallons)	
Boil for a total of 90 minutes with the following hop schedule:	
1.25 oz. Hersbrucker @90 minute(s)	
1.25 oz. Hersbrucker @60 minute(s)	
1 oz. Hallertauer (US) @20 minute(s)	
0.5 oz. Hallertauer (US) @0 minute(s)	

Summary

Rocktoberfest	

Batch Size: 5.50 gal (8.80 gal preboil)	
Estimated OG: 1.055 SG (actual: 1.055 SG)	
Estimated FG: 1.013 SG (actual: 1.015 SG)	
Estimated IBUs: 25 (Finseth; actual: 25)	
Estimated Color: 10 SRM (actual: 10 SRM)	
Brewhouse Efficiency: 73% (actual: 73%)	
Boil Time: 90 minutes	
Grains:	
8.00# Munich Malt 10L (10.0L) (68.09%)	
3.75# Vienna Malt (3.5L) (31.91%)	

Grain	Pounds	Potential	SG Share	Color	% Bill
Munich Malt 10L	8.00	1.035	0.037	10.0	68.09%
Vienna Malt	3.75	1.036	0.018	3.5	31.91%

Brewing			
Batch Size (gal):	5.50	Estimated First Runnings (gal):	5.06
Total Grain Weight (lbs):	11.75	Desired Sparge Temperature (F):	170
Grain Temperature (F):	82	Sparge Water (gal):	3.74
Mash Ratio (qts/lb):	1.50	Sparge Water Temperature (F):	183
Mash/Lauter Deadspace (gal):	0.25	Estimated Preboil Volume (gal):	8.80
Total Water Needed (gal):	10.51	Boil Time (min):	90
Desired Mash Temperature (F):	151	Evaporation Rate (gal/hr):	1.70
Strike Water (gal):	4.41	Estimated Evaporation Loss (gal):	2.55
Strike Temperature (F):	165	Trub Loss (gal):	0.75
Grain Absorption (gal):	1.47	Volume Left in Kettle (gal):	0.00
Mash-out Temperature (F):	151	Actual Evaporation Rate (gal/hr):	1.63
Mash-out Water (gal):	2.37	Actual Evaporation Loss (gal):	2.45

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Hersbrucker	2.5%	1.25	90	10.0	31.25%
Hersbrucker	2.5%	1.25	60	9.4	31.25%
Hallertauer (US)	3.0%	1.00	20	5.5	25.00%
Hallertauer (US)	3.0%	0.50	0	0.0	12.50%

Gravity		Collections	
Potential OG:	1.075	First Runnings (gal):	4.00
OG:	1.055	SG of First Runnings:	1.057
OG Temperature (F):	60	SG Temperature (F):	60
Corrected OG:	1.055	Corrected SG:	1.057
SG at Racking:	1.015	Second Runnings (gal):	4.70
SG Temperature (F):	63	SG of Second Runnings:	1.019
Corrected SG:	1.015	SG Temperature (F):	60
FG:	1.016	Corrected SG:	1.019
FG Temperature (F):	44	Estimated Preboil SG:	1.037
Corrected FG:	1.015	Preboil Volume (gal):	8.70
Estimated ABV (%):	5.5%	SG of Preboil Volume:	1.040
Actual ABV (%):	5.2%	SG Temperature (F):	60
IBU to Gravity Ratio:	0.45	Corrected SG:	1.040

Diacetyl Rest		Carbonation	
Target Fermentation Completion:	63%	CO2 Volume:	2.65
Target SG for Diacetyl Rest:	1.029	Bottling Temperature (F):	
		Priming Sugar (oz):	
		DME (oz):	
		Forced Carbonation (lbs):	

Notes	
Mash at 151F.	
Runoff 1 gal of first runnings, boil 15 mins to caramelize, continue runoff.	
Ferment at 50F for 4 weeks; diacetyl rest 48 hours at 65F.	
Slowly lower temp to 40F by 5F daily; rack and lager at 32F for 2 weeks.	
8 gals strike (~2 mash ratio); 4.5 gals sparge.	
Collected 4.4 gal first runnings; boiled 1 gal down to 0.6 gal in ~ 20 min (so lost 0.4 gal).	
Boiled down to 6.1 gal (adjusted burner w/ fan); perfect numbers!	
More than likely, I can adjust boil off rate w/fan and heat intensity.	
9/6: raised temp to 60F for diacetyl rest and to accommodate Noble Pils dry hop.	
1.029 SG (63% attenuation).	
9/13: very tasty; nice maltiness.	
Ambient temp is 96F with 36% humidity.	
10/9: nice clean taste; good malt and hop balance.	
11/6: diacetyl came through a bit, seemingly more so after kegging	
But I noticed some before racking.	

User Variables	
12 oz. Bottles Required:	51
Primary Fermentation Temp. (F):	50
Secondary Fermentation Temp (F):	32
FNW/IBU Factor (%):	10%
Strike Temperature Factor (F):	5
Sparge Temperature Factor (F):	3
Mash Time (min):	60
Specific Gravity (Brix):	14.2
Specific Gravity (SG):	1.055

Yeast:	
White Labs WLP830 (German Lager)	
2500 mL starter; ferment, crash cool and decant	
Mash/Sparge Schedule:	
Single Infusion, 151F, 60 min; Batch Sparge	
Fermentation Schedule:	
Primary Fermentation: 14 days @50F	
Secondary Fermentation: 26 days @32F	