

BREWSHEET v2.0 (2010-06-17)

Batch			
Brew Name:	Tea Party Lager		
Bottle Top Code:	T	Calories per Pint:	174
Estimated OG:	1.050	Actual OG:	1.052
Estimated FG:	1.012	Actual FG:	1.016
Estimated IBU:	23	Actual IBU:	20
Estimated SRM:	7	Actual SRM:	6
Brew Date:	05/01/10	Collected (gal):	6.00
Rack Date:	05/28/10	Racked (gal):	5.90
Bottle Date:	06/18/10	Bottled (gal):	4.95

BJCP Style Guidelines	
Style:	Vienna Lager
Code:	3A
OG:	1.046-1.052
FG:	1.010-1.014
IBU:	18.0-30.0
SRM:	10.0-16.0
ABV:	4.5-5.7%
CO2:	2.4-2.6

Inventory	
Bottles:	43
Gallons:	4.03
Date Checked:	07/21/10

Efficiency	
Brewhouse:	68%
Batch Size:	71%
Into Boiler:	88%
Into Fermenter:	78%

Yeast Strain	
Yeast Strain:	Wyeast 2035
Type:	American Lager
Attenuation (%):	73-77%
Actual Attenuation (%):	69%
Fermentation Temp (F):	48-58F
Flocculation:	medium

Summary	
Tea Party Lager	

Batch Size: 5.50 gal (7.59 gal preboil)	
Estimated OG: 1.050 SG	
Estimated FG: 1.012 SG	
Estimated IBUs: 23	
Estimated Color: 7 SRM	
Brewhouse Efficiency: 68%	
Boil Time: 60 minutes	

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	10.75	1.036	0.048	2.0	95.56%
Caramel/Crystal 60L	0.50	1.034	0.002	60.0	4.44%

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Tettnanger (US)	4.7%	1.00	60	14.8	26.67%
Hallertauer (US)	3.0%	0.75	20	4.3	20.00%
Hallertauer (US)	3.0%	1.00	10	3.4	26.67%
Hallertauer (US)	3.0%	1.00	dry	0.0	26.67%

Brewing			
Batch Size (gal):	5.50	Estimated First Runnings (gal):	3.22
Total Grain Weight (lbs):	11.25	Desired Sparge Temperature (F):	168
Grain Temperature (F):	73	Sparge Water (gal):	4.37
Mash Ratio (qts/lb):	1.25	Sparge Water Temperature (F):	177
Mash/Lauter Deadspace (gal):	0.25	Estimated Preboil Volume (gal):	7.59
Total Water Needed (gal):	9.24	Boil Time (min):	60
Desired Mash Temperature (F):	154	Evaporation Rate (%):	13%
Strike Water (gal):	3.52	Estimated Evaporation Loss (gal):	0.99
Strike Temperature (F):	170	Tub Loss (gal):	1.10
Grain Absorption (gal):	1.41	Volume Left in Kettle (gal):	0.05
Mash-out Temperature (F):	154	Actual Evaporation Rate (%):	9%
Mash-out Water (gal):	1.36	Actual Evaporation Loss (gal):	0.75

Gravity		Collections	
Potential OG:	1.073	First Runnings (gal):	3.20
OG:	1.050	SG of First Runnings:	1.052
OG Temperature (F):	75	SG Temperature (F):	140
Corrected OG:	1.052	Corrected SG:	1.068
SG at Racking:	1.017	Second Runnings (gal):	4.70
SG Temperature (F):	63	SG of Second Runnings:	1.014
Corrected SG:	1.017	SG Temperature (F):	143
FG:	1.016	Corrected SG:	1.031
FG Temperature (F):	61	Estimated Preboil SG:	1.046
Corrected FG:	1.016	Preboil Volume (gal):	7.90
Potential ABV (%):	6.5%	SG of Preboil Volume:	1.022
Actual ABV (%):	4.7%	SG Temperature (F):	163
IBU to Gravity Ratio:	0.39	Corrected SG:	1.045

Diacetyl Rest		Carbonation	
Target Fermentation Completion:	75%	CO2 Volume:	2.20
Target SG for Diacetyl Rest:	1.023	Bottling Temperature (F):	62
		Priming Sugar (oz):	3.30
		DME (oz):	4.63
		Forced Carbonation (lbs):	19.8

Notes	
Decoction mash: Add 3.38 gal water at 110F and mash at 105F for 30 min. Decoat 0.68 gal and boil >= 10 min, add to mash and mash at 122F for 30 min. Add half the decoat and check temp; keep adding until temp reached; let rest cool to temp and Decoat 1.56 gal and boil >= 10 min, add to mash and mash at 155F for 30 min. Decoat 0.97 gal and boil, add to mash for mash-out at 168F. Collect first runnings. Sparge with 3.75 gal at 168F. After chilling wort, remove 1/6 and store in refrigerator. Same with yeast.	
Record SG when racking to secondary; add 0.015. Once "starter" reaches this SG, pitch and bottle. Store @50F for 2 weeks; lager @30F for 3 weeks.	
5/1: Did 154F single infusion mash instead of decoction.	
5/13: Used refractometer; got 6.25 Brix = 1.024 SG	
5/13: According to hydrometer reading, SG is 1.020 (?)	
5/20: Added dry hops: 1.018 SG (refractometer: 7 Brix?)	
7/21: About the perfect level of maltness offset by a nice bitterness; great beer!	

Yeast Amounts	
Cell Count (billions):	385
Vials (White Labs/Wyeast):	3.3
Dry Yeast (g):	19
Starter Volume (mL):	2000
DME Required (oz):	7.00
Vials Required (w/ Starter):	2.2

ON BREW DAY	
Heat 3.52 gallons of strike water to 170F	
Add grain and mash at 154F for 60 minutes	
Mash-out with 1.36 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 3.22 gallons)	
Add 4.37 gallons at 177F to lauter tun and sparge	
Vorlauf and collect second runnings (approx. 4.37 gallons)	
Boil for a total of 60 minutes with the following hop schedule:	
1 oz. Tettnanger (US) @60 minute(s)	
0.75 oz. Hallertauer (US) @20 minute(s)	
1 oz. Hallertauer (US) @10 minute(s)	

Grains:	
10.75# Pale Malt (2-Row) US (95.56%)	
0.50# Caramel/Crystal 60L (4.44%)	

Hops:	
1.00 oz Tettnanger (US) (4.7%) @60 min	
0.75 oz Hallertauer (US) (3.0%) @20 min	
1.00 oz Hallertauer (US) (3.0%) @10 min	
1.00 oz Hallertauer (US) (3.0%) (dry hop)	

Extra Variables	
12 oz. Bottles Required:	51

Yeast:	
Wyeast 2035 (American Lager)	

Mash/Sparge Schedule:	
Single Infusion, 154F; Batch Sparge	
Mash for 60 min at 154F w/ 3.52 gal of water at 170F	
Mashout w/ 1.36 gal of water at 210F; hold for 10 min	
Batch sparge w/ 4.37 gal of water at 177F; hold for 10 min	