

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 |
| CO2 Released During Fermentation (g): | 797.20 | 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 lautur 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 | |