# BREWSHEET v3.4 (2014-12-14)

user input
calculated

| Brew | | | |
|---|---|---|---|
| Name: | Soul Stripper IPA | | |
| Brew Date: | 2020 April 2 | Collected (gal): | 11.00 |
| Rack Date: | | Racked (gal): | |
| Keg/Bottle Date: | 2020 April 19 | Kegged/Bottled (gal): | 10.00 |
| **Estimated** | | **Actual** | |
| ABV (%): | 7.0% | ABV (%): | 6.3% |
| OG (SG): | 1.067 | OG (SG): | 1.062 |
| FG (SG): | 1.013 | FG (SG): | 1.014 |
| IBU: | 71.4 | IBU: | 73.1 |
| SRM: | 11.8 | SRM: | 11.7 |
| IBU/Gravity Ratio: | 1.06 | IBU/Gravity Ratio: | 1.18 |

| Grain | Pounds | Potential | SG Share | Color | % Bill |
|---|---|---|---|---|---|
| Pale Malt (2-Row) US | 26.00 | 1.036 | 0.060 | 2.0 | 88.14% |
| Caramel/Crystal 80L | 2.00 | 1.034 | 0.004 | 80.0 | 6.78% |
| Munich Malt 10L | 1.50 | 1.035 | 0.003 | 10.0 | 5.08% |

| Hop | Type | Ounces | Boil Time | Alpha % | IBU | % Bill |
|---|---|---|---|---|---|---|
| Centennial | L | 2.00 | fwh | 10.8% | 27.8 | 8.03% |
| Cascade | P | 2.40 | 30 | 4.7% | 11.7 | 9.64% |
| Centennial | L | 1.30 | 30 | 10.8% | 12.6 | 5.22% |
| Cascade | P | 4.00 | 10 | 4.7% | 9.2 | 16.06% |
| Columbus | P | 1.60 | 10 | 12.9% | 10.1 | 6.43% |
| Cascade | P | 2.00 | 0 | 4.7% | 0.0 | 8.03% |
| Columbus | P | 1.60 | 0 | 12.9% | 0.0 | 6.43% |
| Cascade | P | 6.00 | dry | 4.7% | 0.0 | 24.10% |
| Columbus | P | 2.35 | dry | 12.9% | 0.0 | 9.44% |
| Simcoe | P | 1.65 | dry | 13.0% | 0.0 | 6.63% |

**Design Notes**

Using RO water; so at dough-in, add:
11.0 ml lactic acid (88%)
9.2 g CaSO4 (calcium sulfate/gypsum)
4.7 g CaCl2 (calcium chloride)
8.0 g MgSO4 (magnesium sulfate/epsom salt)
4.45 g Ca(OH)2 (calcium hydroxide/slaked lime)
3.7 g NaHCO3 (baking soda)
At boil, add:
5.6 g CaSO4 (calcium sulfate/gypsum)
2.8 g CaCl2 (calcium chloride)
4.8 g MgSO4 (magnesium sulfate/epsom salt)
2.7 g Ca(OH)2 (calcium hydroxide/slaked lime)
2.2 g NaHCO3 (baking soda)
Target is 5.4 mash pH, 140 ppm calcium, 18 ppm magnesium, 25 ppm sodium, 55 ppm chloride, 200 ppm sulfate

| Batch Variables and Calculations | |
|---|---|
| Batch Size (gal): | 11.00 |
| Grain Temperature (F): | 68 |
| Total Grain Weight (lbs): | 29.50 |
| **Mash** | |
| Mash Time (min): | 60 |
| Desired Mash Temperature (F): | 152 |
| Strike Water (gal): | 10.86 |
| Strike Temperature (F): | 170 |
| Mash Ratio (qts/lb): | 1.47 |
| Grain Absorption (gal): | 3.69 |
| Mash Volume (gal): | 13.22 |
| Mash-out Temperature (F): | 168 |
| Estimated First Runnings (gal): | 7.03 |
| First Runnings (gal): | 7.85 |
| First Runnings Gravity (Brix): | 18.60 |
| First Runnings Gravity (SG): | 1.072 |
| **Sparge** | |
| Desired Sparge Temperature (F): | 168 |
| Sparge Water (gal): | 6.56 |
| Sparge Water Temperature (F): | 172 |
| Estimated Second Runnings (gal): | 7.03 |
| Second Runnings (gal): | 6.21 |
| Second Runnings Gravity (Brix): | 9.20 |
| Second Runnings Gravity (SG): | 1.036 |
| Estimated Preboil Volume (gal): | 14.06 |
| Estimated Preboil Gravity (Brix): | 14.45 |
| Preboil Volume (gal): | 14.06 |
| Preboil Gravity (Brix): | 14.60 |
| Preboil Gravity (SG): | 1.057 |
| Extraction Efficiency (%): | 75% |
| **Boil** | |
| Boil Time (min): | 60 |
| Estimated Evaporation Loss (gal): | 1.40 |
| Hop Absorption (gal): | 0.62 |
| Volume Left in Kettle (gal): | 0.25 |
| Actual Evaporation Rate (gal/hr): | 1.15 |
| Actual Evaporation Loss (gal): | 1.15 |
| Original Gravity (Brix): | 16.00 |
| Batch Size Efficiency (%): | 65% |
| Actual Efficiency (%): | 66% |
| **Fermentation** | |
| Primary Fermentation (days): | 14 |
| Primary Fermentation Temperature (F): | 62 |
| Gravity After Primary Fermentation (SG): | |
| Temperature of Reading (F): | |
| Corrected SG: | |
| Secondary Fermentation (days): | 4 |
| Secondary Fermentation Temperature (F): | 70 |
| Gravity After Secondary Fermentation (SG): | |
| Temperature of Reading (F): | |
| Corrected SG: | |
| Tertiary Fermentation (days): | 3 |
| Tertiary Fermentation Temperature (F): | 32 |
| Final Gravity (SG): | 1.014 |
| Temperature of Reading (F): | 40 |
| Corrected SG: | 1.014 |
| Target Fermentation for Diacetyl Rest (%): | |
| Target Gravity for Diacetyl Rest (SG): | |
| Calories per Pint: | 205 |
| 12 oz. Bottles Required: | 102 |
| **Carbonation** | |
| Bottling Temperature (F): | |
| Volumes of CO2: | 1.90 |
| 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): | 1.40 |
| 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: | American IPA |
| Code: | 14B |
| OG: | 1.056-1.075 |
| FG: | 1.010-1.018 |
| IBU: | 40.0-70.0 |
| SRM: | 6.0-15.0 |
| ABV: | 5.5-7.5% |
| CO2: | 1.5-2.3 |

| Yeast Strain | |
|---|---|
| Yeast Strain: | Danstar Nottingham (Dry Ale) |
| Type: | Dry Ale |
| Attenuation (%): | 75-85% |
| Actual Attenuation (%): | 78% |
| Fermentation Temp (F): | 57-70F |
| Flocculation: | high |

| Required Amounts | |
|---|---|
| Cell Count (billions): | 510 |
| Vials (White Labs/Wyeast): | |
| Dry Yeast (g): | 25.5 |
| **Yeast Starter/Slurry** | |
| Vials (White Labs/Wyeast): | |
| Date Yeast Produced: | |
| Yeast Viability (%): | |
| Yeast Growth Rate: | |
| Yeast Innoculation 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**

| | |
|---|---|
| | |

**Brewing Notes**

4/2: strike temp was 154F; went down to 152F in 15min.
Had a meeting, so instead of boiling longer to hit target gravity, decided to collect.
4/11: dry hopped
4/15: 1.012 SG; began cold crashing to 50F.
4/16: continued cold crashing to 40F.
4/17: continued cold crashing to 32F.
4/19: kegged; both batches similar; could likely have conditioned for another week, but I wanted some IPA during the COVID-19 "stay at home" business!

| Batch Scaling | | | | |
|---|---|---|---|---|
| Desired OG: | | Total Weight (lbs): | | |
| Batch Size (gal): | | Total Bill: | | |
| Brewhouse Efficiency (%): | | | | |
| **Grain** | **Pounds** | **Potential** | **Color** | **% Bill** |
| | | | | |

| Poundage | | |
|---|---|---|
| Goal (lbs): | 26.00 | |
| Amount (lbs \| oz.f_oz): | | |
| Amount (lbs \| oz.f_oz): | | |
| Amount (lbs \| oz.f_oz): | | |
| Amount (lbs \| oz.f_oz): | | |
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| 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): | 26 | 0.00 |

| Hydrometer Correction | | |
|---|---|---|
| SG: | 1.060 | |
| Temperature (F): | 69 | |
| Corrected SG: | 1.062 | |

| Gravity Calculator | | | |
|---|---|---|---|
| Brix: | 15.50 | 16.00 | |
| Specific Gravity: | 1.060 | 1.062 | |
| Degrees Plato: | 14.69 | 15.14 | |

| Brix Ethanol Correction | |
|---|---|
| Original Brix: | |
| Current Brix: | |
| SG: | |