

BREWSHEET v2.5 (2011-11-13)

Batch			
Brew Name:	Amber Experiment		
Bottle Top Code:		Calories per Pint:	171
Estimated OG:	1.050	Actual OG:	1.050
Estimated FG:	1.015	Actual FG:	1.021
Estimated IBU:	35	Actual IBU:	35
Estimated SRM:	13	Actual SRM:	13
Brew Date:	11/12/11	Collected (gal):	11.00
Rack Date:	12/01/11	Racked (gal):	5.00
Bottle Date:	12/01/11	Bottled (gal):	5.00

BJCP Style Guidelines	
Style:	American Amber Ale
Code:	10B
OG:	1.045-1.060
FG:	1.010-1.015
IBU:	25.0-40.0+
SRM:	10.0-17.0
ABV:	4.5-6.0%
CO2:	2.2-2.7

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	70%
Batch Size:	70%
Into Boiler:	79%
Into Fermenter:	70%

Yeast Strain	
Yeast Strain:	Fermentis Safale S-04 (Dry Ale)
Type:	Dry Ale
Attenuation (%):	65-75%
Actual Attenuation (%):	59%
Fermentation Temp (F):	59-75F
Flocculation:	medium-high

Yeast Amounts	
Cell Count (billions):	384
Vials (White Labs/Wyeast):	3.3
Dry Yeast (g):	19
Starter Volume (mL):	
DME Required (oz)	
Vials Required (w/ Starter):	

ON BREW DAY	
Heat 8.63 gallons of strike water to 171F	
Add grain and mash at 154F for 60 minutes	
Mash-out with 4.03 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 9.53 gallons)	
Add 3.91 gallons at 190F to lauter tun and sparge	
Vorlauf and collect second runnings (approx. 3.91 gallons)	
Boil for a total of 60 minutes with the following hop schedule:	

Summary	
Amber Experiment	

Batch Size: 11.00 gal (13.44 gal preboil)	
Estimated OG: 1.050 SG (actual: 1.050 SG)	
Estimated FG: 1.015 SG (actual: 1.021 SG)	
Estimated IBUs: 35 (Tinseth; actual: 35)	
Estimated Color: 13 SRM (actual: 13 SRM)	
Brewhouse Efficiency: 70% (actual: 70%)	
Boil Time: 60 minutes	

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	14.50	1.036	0.033	2.0	63.04%
Munich Malt 10L	3.50	1.035	0.008	10.0	15.22%
British carastan	3.00	1.035	0.007	34.0	13.04%
Caramel/Crystal 90L	1.00	1.034	0.002	90.0	4.35%
Rice hulls	1.00	1.000	0.000	0.0	4.35%

Brewing	
Batch Size (gal):	11.00
Estimated First Runnings (gal):	9.53
Total Grain Weight (lbs):	23.00
Desired Sparge Temperature (F):	170
Grain Temperature (F):	3.91
Mash Ratio (qts/lb):	1.50
Sparge Water Temperature (F):	190
Mash/Lauter Deadspace (gal):	0.25
Estimated Preboil Volume (gal):	13.44
Total Water Needed (gal):	16.57
Boil Time (min):	60
Desired Mash Temperature (F):	154
Evaporation Rate (gal/hr):	1.69
Strike Water (gal):	8.63
Estimated Evaporation Loss (gal):	1.69
Strike Temperature (F):	171
Trub Loss (gal):	0.75
Grain Absorption (gal):	2.88
Volume Left in Kettle (gal):	0.00
Mash-out Temperature (F):	154
Actual Evaporation Rate (gal/hr):	1.95
Mash-out Water (gal):	4.03
Actual Evaporation Loss (gal):	1.95

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Willamette	4.8%	3.25	fwh	27.0	30.95%
Willamette	4.8%	2.25	10	6.2	21.43%
Cascade	5.5%	1.00	5	1.7	9.52%
Cascade	5.5%	1.00	0	0.0	9.52%
Willamette	4.8%	1.00	0	0.0	9.52%
Willamette	4.8%	1.00	dry	0.0	9.52%
Cascade	5.5%	1.00	dry	0.0	9.52%

Gravity		Collections	
Potential OG:	1.071	First Runnings (gal):	6.80
OG:	1.050	SG of First Runnings:	1.060
OG Temperature (F):	60	SG Temperature (F):	60
Corrected OG:	1.050	Corrected SG:	1.060
SG at Racking:		Second Runnings (gal):	6.90
SG Temperature (F):		SG of Second Runnings:	1.025
Corrected SG:		SG Temperature (F):	60
FG:	1.021	Corrected SG:	1.025
FG Temperature (F):	51	Estimated Preboil SG:	1.043
Corrected FG:	1.021	Preboil Volume (gal):	13.70
Estimated ABV (%):	4.6%	SG of Preboil Volume:	1.045
Actual ABV (%):	3.9%	SG Temperature (F):	60
IBU to Gravity Ratio:	0.69	Corrected SG:	1.045

Diacetyl Rest		Carbonation	
Target Fermentation Completion:		CO2 Volume:	2.45
Target SG for Diacetyl Rest:		Bottling Temperature (F):	
		Priming Sugar (oz):	

Fermentation	
CO2 Released During Fermentation (g):	1218.72
Forced Carbonation (lbs):	

Notes	
Boil about 4 qt of first runnings and reduce to 1 qt; add with 5 mins left in boil.	Flavor is malty with a hint of sweet; nice bitterness; great beer so far.
Use White Labs Clarity-Ferm to try to be gluten free	Also, the yeast cake was seriously packed on the bottom of the fermenter; I suspect Clarity-Ferm!
Add one 5mL vial once cooled in fermenter (prior to fermentation).	12/8: beautiful color and has cleared nicely.
10.1 gal strike (~1.76 mash ratio), 7.25 gal sparge	Slight diacetyl aroma but the malt really shines through on this one.
11/12: brewed this at Minden Fasching (Carnival) outside with a stiff wind...	Flavor is malty with snappy bitterness, barely noticeable diacetyl.
Did not boil some of the first runnings (for obvious reasons).	Diacetyl is initially noticeable but fades quickly after pouring. After that, it's a wonderful beer!
Swapped to 60 min boil (modified recipe) due to carnival	Although this fermented cool, I get a lot of fruity esters.
Gave 5.5 gal (half) to another member of the local brew club.	Also seems a bit more bitterness than the IBUs it claims; somewhere around maybe 45?
No aeration other than wort crashing into the fermenter at low flow (valve about 1/10" open).	Wow, this guy gets better as it sits a bit in the glass!
12/15: cold crashed.	12/11: no noticeable diacetyl when first served; slight malty aroma and flavor; almost no sweetness; good, or
12/1: nice malty aroma, maybe even slightly sweet	Slight diacetyl comes out as the beer warms which is fine for the style.
Did not end up dry hopping this one.	Nice head retention!

User Variables	
12 oz. Bottles Required:	51
Primary Fermentation Temp. (F):	63
Secondary Fermentation Temp (F):	72
FWH IBU Factor (%):	10%
Strike Temperature Factor (F):	5
Sparge Temperature Factor (F):	3
Mash Time (min):	60
Specific Gravity (Brix):	12.85
Specific Gravity (SG):	1.050

Grains:	
14.50# Pale Malt (2-Row) US (2.0L) (63.04%)	
3.50# Munich Malt 10L (10.0L) (15.22%)	
3.00# British carastan (34.0L) (13.04%)	
1.00# Caramel/Crystal 90L (90.0L) (4.35%)	
1.00# Rice hulls (0.0L) (4.35%)	

Hops:	
3.25 oz Willamette (4.8%) @fwh	
2.25 oz Willamette (4.8%) @10 min	
1.00 oz Cascade (5.5%) @5 min	
1.00 oz Cascade (5.5%) @0 min	
1.00 oz Willamette (4.8%) @0 min	
1.00 oz Willamette (4.8%) (dry hop)	
1.00 oz Cascade (5.5%) (dry hop)	

Yeast:	
Fermentis Safale S-04 (Dry Ale)	
Mash/Sparge Schedule:	
Single Infusion, 154F, 60 min; Batch Sparge	
Fermentation Schedule:	
Primary Fermentation: 19 days @63F	
Secondary Fermentation: 0 days @72F	