

BREWSHEET v2.1 (2011-01-04)

Batch			
Brew Name:	Brother Cain's IPA		
Bottle Top Code:	Calories per Pint:		164
Estimated OG:	1.056	Actual OG:	1.049
Estimated FG:	1.013	Actual FG:	1.015
Estimated IBU:	84	Actual IBU:	84
Estimated SRM:	15	Actual SRM:	15
Brew Date:	01/23/11	Collected (gal):	5.75
Rack Date:	02/07/11	Racked (gal):	5.00
Bottle Date:	02/17/11	Bottled (gal):	5.00

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

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	73%
Batch Size:	64%
Into Boiler:	86%
Into Fermenter:	69%

Yeast Strain	
Yeast Strain:	Fermentis Safale US-05 (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-79%
Actual Attenuation (%):	70%
Fermentation Temp (F):	59-75F
Flocculation:	low-medium

Yeast Amounts	
Cell Count (billions):	215
Vials (White Labs/Wyeast):	1.8
Dry Yeast (g):	11
Starter Volume (mL):	
DME Required (oz)	
Vials Required (w/ Starter):	

ON BREW DAY	
Heat 3.52 gallons of strike water to 170F	
Add grain and mash at 153F for 60 minutes	
Mash-out with 1.73 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 3.59 gallons)	
Add 5.45 gallons at 178F to lautertun and sparge	
Vorlauf and collect second runnings (approx. 5.45 gallons)	
Boil for a total of 90 minutes with the following hop schedule:	
1 oz. Magnum (GR) @45 minute(s)	
1 oz. Columbus @30 minute(s)	
1 oz. Cascade @15 minute(s)	
1 oz. Cascade @10 minute(s)	
1 oz. Cascade @5 minute(s)	

Summary	
Brother Cain's IPA	

Batch Size: 5.50 gal (9.04 gal preboil)	
Estimated OG: 1.056 SG (actual: 1.049 SG)	
Estimated FG: 1.013 SG (actual: 1.015 SG)	
Estimated IBUs: 84 (Finest; actual: 84)	
Estimated Color: 13 SRM (actual: 13 SRM)	
Brewhouse Efficiency: 73% (actual: 64%)	
Boil Time: 90 minutes	
Grains:	
10.25# Maris Otter Malt (4.0L) (91.11%)	
1.00# Caramel/Crystal 90L (90.0L) (8.89%)	

Grain	Pounds	Potential	SG Share	Color	% Bill
Maris Otter Malt	10.25	1.038	0.052	4.0	91.11%
Caramel/Crystal 90L	1.00	1.034	0.005	90.0	8.89%

Brewing	
Batch Size (gal):	5.50
Total Grain Weight (lbs):	11.25
Grain Temperature (F):	66
Mash Ratio (qts/lb):	1.25
Mash/Lauter Deadspace (gal):	0.25
Total Water Needed (gal):	10.70
Desired Mash Temperature (F):	153
Strike Water (gal):	3.52
Strike Temperature (F):	170
Grain Absorption (gal):	1.41
Mash-out Temperature (F):	153
Mash-out Water (gal):	1.73

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Magnum (GR)	12.5%	1.00	45	34.1	15.38%
Columbus	14.5%	1.00	30	33.1	15.38%
Cascade	5.4%	1.00	15	8.0	15.38%
Cascade	5.4%	1.00	10	5.8	15.38%
Cascade	5.4%	1.00	5	3.2	15.38%
Cascade	5.4%	1.50	dry	0.0	23.08%

Gravity		Collections	
Potential OG:	1.077	First Runnings (gal):	4.00
OG:	1.049	SG of First Runnings:	1.069
OG Temperature (F):	60	SG Temperature (F):	60
Corrected OG:	1.049	Corrected SG:	1.069
SG at Racking:		Second Runnings (gal):	5.25
SG Temperature (F):		SG of Second Runnings:	1.021
Corrected SG:		SG Temperature (F):	60
FG:	1.015	Corrected SG:	1.021
FG Temperature (F):	52	Estimated Preboil SG:	1.042
Corrected FG:	1.015	Preboil Volume (gal):	9.25
Potential ABV (%):	7.4%	SG of Preboil Volume:	1.039
Actual ABV (%):	4.5%	SG Temperature (F):	60
IBU to Gravity Ratio:	1.70	Corrected SG:	1.039

Diacetyl Rest		Carbonation	
Target Fermentation Completion:		CO2 Volume:	1.90
Target SG for Diacetyl Rest:		Bottling Temperature (F):	
		Priming Sugar (oz):	
		DME (oz):	
		Forced Carbonation (lbs):	

Fermentation	
CO2 Released During Fermentation (g):	743.77

Notes	
Second runnings low SG again.	
2/7: dry hopped in primary.	
2/17: pretty big hop flavor and aroma but the malt does come through.	
24 hours at 30+ PSI and then lower to 15 PSI through the weekend; try on 2/21	

User Variables	
12 oz. Bottles Required:	51
Primary Fermentation Temp. (F):	66
Secondary Fermentation Temp (F):	72
FW/H IBU Factor (%):	10%
Strike Temperature Factor (F):	3
Sparge Temperature Factor (F):	2
Specific Gravity (P):	12.1
Specific Gravity (SG):	1.049

Yeast:	
Fermentis Safale US-05 (Dry Ale)	
Mash/Sparge Schedule:	
Single Infusion, 153F; Batch Sparge	
Mash for 60 min at 153F w/ 3.52 gal of water at 170F	
Mashout w/ 1.73 gal of water at 210F; hold for 10 min	
Batch sparge w/ 5.45 gal of water at 178F; hold for 10 min	
Fermentation Schedule:	
Primary Fermentation: 15 days @66F	
Secondary Fermentation: 10 days @72F	