

BREWSHEET v2.3 (2011-02-26)

Batch			
Brew Name:	Back in Black IPA		
Bottle Top Code:	Calories per Pint:		217
Estimated OG:	1.068	Actual OG:	1.063
Estimated FG:	1.016	Actual FG:	1.030
Estimated IBU:	74	Actual IBU:	75
Estimated SRM:	43	Actual SRM:	45
Brew Date:	06/19/11	Collected (gal):	5.25
Rack Date:	07/14/11	Racked (gal):	4.50
Bottle Date:	07/14/11	Bottled (gal):	4.50

BJCP Style Guidelines	
Style:	Cascadian Dark Ale
Code:	
OG:	1.060-1.075
FG:	1.008-1.016
IBU:	60.0-90.0
SRM:	30.0-40.0
ABV:	
CO2:	1.5-2.3

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	70%
Batch Size:	65%
Into Boiler:	68%
Into Fermenter:	67%

Yeast Strain	
Yeast Strain:	White Labs WLP001 (California Ale)
Type:	California Ale
Attenuation (%):	73-80%
Actual Attenuation (%):	52%
Fermentation Temp (F):	68-73F
Flocculation:	medium

Yeast Amounts	
Cell Count (billions):	282
Vials (White Labs/Wyeast):	2.4
Dry Yeast (g):	14
Starter Volume (mL):	3500
DME Required (oz):	12.25
Vials Required (w/ Starter):	1.0

ON BREW DAY	
Heat 5 gallons of strike water to 173F	
Add grain and mash at 155F for 60 minutes	
Mash-out with 2.18 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 4.93 gallons)	
Add 4.37 gallons at 184F to lautur tun and sparge	
Vorlauf and collect second runnings (approx. 4.37 gallons)	
Boil for a total of 90 minutes with the following hop schedule:	
1.5 oz. Centennial @90 minute(s)	
1.25 oz. Cascade @20 minute(s)	
1.25 oz. Centennial @20 minute(s)	
1.25 oz. Cascade @5 minute(s)	
1.5 oz. Columbus @5 minute(s)	
2 oz. Cascade @0 minute(s)	
1 oz. Columbus @0 minute(s)	

Summary	
Back in Black IPA	
Batch Size: 6.00 gal (9.29 gal preboil)	
Estimated OG: 1.068 SG (actual: 1.063 SG)	
Estimated FG: 1.016 SG (actual: 1.030 SG)	
Estimated IBUs: 74 (Finseth; actual: 75)	
Estimated Color: 43 SRM (actual: 45 SRM)	
Brewhouse Efficiency: 70% (actual: 65%)	
Boil Time: 90 minutes	
Grains:	
12.13# Maris Otter Malt (4.0L) (75.78%)	
1.63# De-bittered black malt (413.0L) (10.16%)	
1.63# Caramel/Crystal 60L (60.0L) (10.16%)	
0.63# Carapils/Dextrine (2.0L) (3.91%)	

Grain	Pounds	Potential	SG Share	Color	% Bill
Maris Otter Malt	12.13	1.038	0.054	4.0	75.78%
De-bittered black malt	1.63	1.030	0.006	413.0	10.16%
Caramel/Crystal 60L	1.63	1.034	0.006	60.0	10.16%
Carapils/Dextrine	0.63	1.033	0.002	2.0	3.91%

Brewing		
Batch Size (gal):	6.00	Estimated First Runnings (gal): 4.93
Total Grain Weight (lbs):	16.00	Desired Sparge Temperature (F): 170
Grain Temperature (F):	85	Sparge Water (gal): 4.37
Mash Ratio (qts/lb):	1.25	Sparge Water Temperature (F): 184
Mash/Lauter Deadspace (gal):	0.25	Estimated Preboil Volume (gal): 9.29
Total Water Needed (gal):	11.54	Boil Time (min): 90
Desired Mash Temperature (F):	155	Evaporation Rate (gal/hr): 1.69
Strike Water (gal):	5.00	Estimated Evaporation Loss (gal): 2.54
Strike Temperature (F):	173	Trub Loss (gal): 0.75
Grain Absorption (gal):	2.00	Volume Left in Kettle (gal): 0.50
Mash-out Temperature (F):	155	Actual Evaporation Rate (gal/hr): 1.32
Mash-out Water (gal):	2.18	Actual Evaporation Loss (gal): 1.98

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Centennial	8.8%	1.50	90	34.5	10.91%
Cascade	5.3%	1.25	20	9.8	9.09%
Centennial	8.8%	1.25	20	16.3	9.09%
Cascade	5.3%	1.25	5	3.2	9.09%
Columbus	14.5%	1.50	5	10.6	10.91%
Cascade	5.3%	2.00	0	0.0	14.55%
Columbus	14.5%	1.00	0	0.0	7.27%
Cascade	5.3%	1.00	dry	0.0	7.27%
Columbus	14.5%	1.00	dry	0.0	7.27%
Centennial	8.8%	1.00	dry	0.0	7.27%
Simcoe	11.8%	1.00	dry	0.0	7.27%

Gravity		Collections	
Potential OG:	1.098	First Runnings (gal):	4.68
OG:	1.063	SG of First Runnings:	1.064
OG Temperature (F):	60	SG Temperature (F):	60
Corrected OG:	1.063	Corrected SG:	1.064
SG at Racking:		Second Runnings (gal):	3.80
SG Temperature (F):		SG of Second Runnings:	1.026
Corrected SG:		SG Temperature (F):	60
FG:	1.029	Corrected SG:	1.026
FG Temperature (F):	69	Estimated Preboil SG:	1.047
Corrected FG:	1.030	Preboil Volume (gal):	8.48
Potential ABV (%):	8.9%	SG of Preboil Volume:	1.047
Actual ABV (%):	4.3%	SG Temperature (F):	60
IBU to Gravity Ratio:	1.19	Corrected SG:	1.047

Diacetyl Rest		Carbonation	
Target Fermentation Completion:		CO2 Volume:	1.90
Target SG for Diacetyl Rest:		Bottling Temperature (F):	
		Priming Sugar (oz):	
		DME (oz):	
Fermentation		Forced Carbonation (lbs):	
CO2 Released During Fermentation (g):	649.96		

Notes	
7/4: dry hopped; already a nice hop aroma.	
7/14: high FG but I don't get much residual sweetness.	
Nice bitterness and great hop aroma!	
We'll see how she does after carbonation.	

User Variables	
12 oz. Bottles Required:	46
Primary Fermentation Temp. (F):	66
Secondary Fermentation Temp (F):	72
FNW/IBU Factor (%):	10%
Strike Temperature Factor (F):	7
Sparge Temperature Factor (F):	4
Mash Time (min):	60
Specific Gravity (Brix):	16.3
Specific Gravity (SG):	1.063

Yeast:	
White Labs WLP001 (California Ale)	
Mash/Sparge Schedule:	
Single Infusion, 155F; Batch Sparge	
Mash for 60 min at 155F w/ 5.00 gal of water at 173F	
Mashout w/ 2.17 gal of water at 210F; hold for 10 min	
Batch sparge w/ 4.37 gal of water at 184F; hold for 10 min	
Fermentation Schedule:	
Primary Fermentation: 25 days @66F	
Secondary Fermentation: 0 days @72F	