

BREWSHEET v2.0 (2010-06-17)

Batch			
Brew Name:	Back in Black IPA v2.0		
Bottle Top Code:	Calories per Pint:	227	
Estimated OG:	1.068	Actual OG:	1.068
Estimated FG:	1.016	Actual FG:	1.020
Estimated IBU:	74	Actual IBU:	78
Estimated SRM:	40	Actual SRM:	42
Brew Date:	11/20/10	Collected (gal):	5.50
Rack Date:	12/02/10	Racked (gal):	5.35
Bottle Date:	12/09/10	Bottled (gal):	5.00

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:	73%
Batch Size:	72%
Into Boiler:	85%
Into Fermenter:	69%

Yeast Strain	
Yeast Strain:	White Labs WLP001 (California Ale)
Type:	California Ale
Attenuation (%):	73-80%
Actual Attenuation (%):	71%
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 4.96 gallons of strike water to 170F	
Add grain and mash at 154F for 60 minutes	
Mash-out with 2.43 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 5.23 gallons)	
Add 4.02 gallons at 183F to lauter tun and sparge	
Vorlauf and collect second runnings (approx. 4.02 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 v2.0	

Batch Size:	6.00 gal (9.25 gal preboil)
Estimated OG:	1.068 SG (actual: 1.068 SG)
Estimated FG:	1.016 SG (actual: 1.020 SG)
Estimated IBU:	74 (Tinseth; actual: 78)
Estimated Color:	40 SRM (actual: 42 SRM)
Brewhouse Efficiency:	73% (actual: 72%)
Boil Time:	90 minutes

Grain	Pounds	Potential	SG Share	Color	% Bill
Maris Otter Malt	12.50	1.038	0.058	4.0	81.97%
De-bittered black malt	1.50	1.030	0.005	413.0	9.84%
Caramel/Crystal 90L	0.75	1.034	0.003	90.0	4.92%
Carapils/Dextrine	0.50	1.033	0.002	2.0	3.28%

Brewing			
Batch Size (gal):	6.00	Estimated First Runnings (gal):	5.23
Total Grain Weight (lbs):	15.25	Desired Sparge Temperature (F):	170
Grain Temperature (F):	70	Sparge Water (gal):	4.02
Mash Ratio (qts/lb):	1.30	Sparge Water Temperature (F):	183
Mash/Lauter DeadSpace (gal):	0.25	Estimated Preboil Volume (gal):	9.25
Total Water Needed (gal):	11.40	Boil Time (min):	90
Desired Mash Temperature (F):	154	Evaporation Rate (%):	18%
Strike Water (gal):	4.96	Estimated Evaporation Loss (gal):	2.50
Strike Temperature (F):	170	Tub Loss (gal):	0.75
Grain Absorption (gal):	1.91	Volume Left in Kettle (gal):	0.25
Mash-out Temperature (F):	153	Actual Evaporation Rate (%):	21%
Mash-out Water (gal):	2.43	Actual Evaporation Loss (gal):	3.03

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Centennial	9.1%	1.50	90	35.7	10.91%
Cascade	4.6%	1.25	20	8.5	9.09%
Centennial	9.1%	1.25	20	16.8	9.09%
Cascade	4.6%	1.25	5	2.8	9.09%
Columbus	14.5%	1.50	5	10.6	10.91%
Cascade	4.6%	2.00	0	0.0	14.55%
Columbus	14.5%	1.00	0	0.0	7.27%
Cascade	4.6%	1.00	dry	0.0	7.27%
Columbus	14.5%	1.00	dry	0.0	7.27%
Centennial	9.1%	1.00	dry	0.0	7.27%
Simcoe	12.2%	1.00	dry	0.0	7.27%

Gravity		Collections	
Potential OG:	1.094	First Runnings (gal):	5.10
OG:	1.067	SG of First Runnings:	1.063
OG Temperature (F):	66	SG Temperature (F):	104
Corrected OG:	1.068	Corrected SG:	1.070
SG at Racking:	1.022	Second Runnings (gal):	4.43
SG Temperature (F):	66	SG of Second Runnings:	1.025
Corrected SG:	1.023	SG Temperature (F):	114
FG:	1.018	Corrected SG:	1.034
FG Temperature (F):	69	Estimated Preboil SG:	1.053
Corrected FG:	1.020	Preboil Volume (gal):	9.53
Potential ABV (%):	9.0%	SG of Preboil Volume:	1.048
Actual ABV (%):	6.3%	SG Temperature (F):	79
IBU to Gravity Ratio:	1.18	Corrected SG:	1.050

Diacetyl Rest		Carbonation	
Target Fermentation Completion:	75%	CO2 Volume:	1.90
Target SG for Diacetyl Rest:	1.029	Bottling Temperature (F):	
		Priming Sugar (oz):	
		DME (oz):	
CO2 Released During Fermentation (g):	990.27	Forced Carbonation (lbs):	

Notes	
First runnings refrac = 16.6 P = 1.068 SG	This beer won 2 nd place at a local homebrew club competition.
Second runnings refrac = 8 P = 1.032 SG	Out of 500 points, 1 st place was around 450, 2 nd place at around 440 and 3 rd place in the mid-300s!
Preboil refrac = 12.3 P = 1.050 SG	Great hop aroma right away that dissipates over time to reveal a complex maltiness and roastiness.
Collected refrac = 16 P = 1.066 SG	This turned out to be exceptional near the end of 01/2011 (2 months after brew day).
12/2: nice and bitter with a more prominent toast flavor and aroma.	
12/9: wonderful hop aroma; this version has a bit more pronounced roast	
I would even add more debittered black (15%?) 2/3/11: NO!	
Bitterness is nice; perfect for this brew I think	
Attenuation lower probably due to higher mash temp; I'd go even higher next time (155?)	
12/11: hooked up CO2 at 30 PSI (shook for 2 mins).	

Extra Variables	
12 oz. Bottles Required:	51
Primary Fermentation Temp. (F):	66
Secondary Fermentation Temp (F):	70

Grains:	
12.50# Maris Otter Malt (81.97%)	
1.50# De-bittered black malt (9.84%)	
0.75# Caramel/Crystal 90L (4.92%)	
0.50# Carapils/Dextrine (3.28%)	

Hops:	
1.50 oz Centennial (9.1%) @90 min	
1.25 oz Cascade (4.6%) @20 min	
1.25 oz Centennial (9.1%) @20 min	
1.25 oz Cascade (4.6%) @5 min	
1.50 oz Columbus (14.5%) @5 min	
2.00 oz Cascade (4.6%) @0 min	
1.00 oz Columbus (14.5%) @0 min	
1.00 oz Cascade (4.6%) (dry hop)	
1.00 oz Columbus (14.5%) (dry hop)	
1.00 oz Centennial (9.1%) (dry hop)	
1.00 oz Simcoe (12.2%) (dry hop)	

Yeast:	
White Labs WLP001 (California Ale) (California Ale)	

Mash/Sparge Schedule:	
Single infusion, 154F; Batch Sparge	
Mash for 60 min at 154F w/ 4.96 gal of water at 170F	
Mashout w/ 2.43 gal of water at 210F; hold for 10 min	
Batch sparge w/ 4.02 gal of water at 183F; hold for 10 min	

Fermentation Schedule:	
Primary Fermentation: 12 days @66F	
Secondary Fermentation: 7 days @70F	