

BREWSHEET v1.0 (2010-02-26)

Batch				BJCP Style Guideline				Efficiency	
Brew Name:	Harpooned IPA (H)			Style:	American IPA			Brewhouse Efficiency:	75%
Estimated OG:	1.060	Actual OG:	1.055	Code:	14B			Efficiency (on Batch Size):	69%
Estimated FG:	1.014	Actual FG:	1.016	OG:	1.056-1.075			Efficiency into Boiler:	
Estimated IBU:	52.6	Actual IBU:	49.9	FG:	1.010-1.018			Efficiency into Fermenter:	76%
Estimated SRM:	7.6	Actual SRM:	7.1	IBU:	40.0-70.0				
Brew Date:	02/06/10	Collected:	6.00	SRM:	6.0-15.0				
Rack Date:	02/16/10	Racked:	5.60	ABV:	5.5-7.5%				
Bottle Date:	03/01/10	Bottles:	52	CO2:	1.5-2.3				

Grain	Pounds	Potential	Color	% Bill
Pale Malt (2-Row) US	11.50	1.036	2	93.88%
Caramel/Crystal 60L	0.50	1.034	60	4.08%
Victory Malt	0.25	1.034	25	2.04%

Hop	Alpha %	Ounces	Boil Time	IBU
Cluster	7.5%	2.00	60	43.2
Fuggie (US)	4.0%	0.50	15	2.9
Cascade	5.4%	0.50	15	3.9
Fuggie (US)	4.0%	0.50	5	1.1
Cascade	5.4%	0.50	5	1.5

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

Yeast Required	
Cell Count (billions):	229
Vials (White Labs/Wyeast):	1.9
Dry Yeast (g):	12
Starter Volume (mL):	
DME Required (oz)	
Vials Required (w/ Starter):	

User Variables	
Calories per Pint:	184
12 oz. Bottles Required:	54
DME for Carbonation (oz.):	4.31
Estimated Preboil SG:	1.044
Actual Attenuation (%):	71.24%
Bottle Top Code:	H

Carbonation	
CO2 Volume:	1.90
Bottling Temperature (F):	67
Priming Sugar (oz):	3.08
Forced Carbonation (lbs):	17.7

Inventory	
Bottles Remaining:	13
Gallons Remaining:	1.22
Date Checked:	05/12/10

Diacetyl Rest	
Target Fermentation Completion:	75%
Target SG for Diacetyl Rest:	1.024

BREW DAY

Single Infusion Mash (with Mash-out) and Batch Sparge Brew Schedule	
Heat 3.83 gallons of mash water to 169F	
Add grain and mash at 152F for 60 minutes	
At T-40 to mash-out, heat 1.9 gallons of mash-out water on the stove to 210F	
At T-25 to mash-out, heat 3.93 gallons of sparge water in the kettle to 180F	
Mash-out with 1.9 gallons, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 3.95 gallons)	
Add 3.93 gallons to lauter tun, mix, hold for 10 minutes, and sparge	
Vorlauf and collect second runnings (approx. 3.93 gallons)	
Boil for a total of 75 minutes with the following hop schedule:	
2 oz. Cluster @60 minute(s)	
0.5 oz. Fuggie (US) @15 minute(s)	
0.5 oz. Cascade @15 minute(s)	
0.5 oz. Fuggie (US) @5 minute(s)	
0.5 oz. Cascade @5 minute(s)	

Notes	
First time cracking grains using my new mill!	
Mash temp hit perfectly.	
Vorlaufed with valve cracked open; collected fully open; better efficiency.	
A bit much to the kettle, so 75 min boil instead of 60.	
Pitched at 60F after aerating.	
Tried first bottle 2 weeks after bottling; awesome brew! More like Harpoon IPA in Austin as opposed to the hoppier version in Boston.	
A great beer. Nice bitterness and maltiness. Better after 2 months in the bottle.	