

BREWSHEET v1.0 (2010-02-26)

Batch				BJCP Style Guideline				Efficiency	
Brew Name:	Hakuna Matata Pale Ale (HM)			Style:	American Pale Ale			Brewhouse Efficiency:	68%
Estimated OG:	1.053	Actual OG:	1.057	Code:	10A			Efficiency (on Batch Size):	74%
Estimated FG:	1.012	Actual FG:	1.013	OG:	1.045-1.060			Efficiency into Boiler:	90%
Estimated IBU:	36.8	Actual IBU:	34.8	FG:	1.010-1.015			Efficiency into Fermenter:	75%
Estimated SRM:	9.5	Actual SRM:	9.4	IBU:	30.0-45.0				
Brew Date:	03/13/10	Collected:	5.50	SRM:	5.0-14.0				
Rack Date:	03/25/10	Racked:	5.30	ABV:	4.5-6.0%				
Bottle Date:	04/05/10	Bottles:	51	CO2:	2.2-2.7				

Grain	Pounds	Potential	Color	% Bill
Pale Malt (2-Row) US	11.00	1.036	2	91.67%
Caramel/Crystal 60L	1.00	1.034	60	8.33%

Hop	Alpha %	Ounces	Boil Time	IBU
Magnum	14.4%	0.40	60	17.6
Perle (US)	7.1%	0.50	60	10.9
Cascade	7.5%	1.00	10	8.3
Cascade	7.5%	2.00	0	0.0

Gravity		Collections	
Potential OG:	1.078	First Runnings (gal):	3.90
OG:	1.057	SG of First Runnings:	1.054
OG Temperature (F):	63	SG Temperature (F):	141
Corrected OG:	1.057	Corrected SG:	1.070
SG at Racking:	1.013	Second Runnings (gal):	3.80
SG Temperature (F):	68	SG of Second Runnings:	1.016
Corrected SG:	1.014	SG Temperature (F):	151
FG:	1.012	Corrected SG:	1.035
FG Temperature (F):	72	Preboil Volume (gal):	7.70
Corrected FG:	1.013	SG of Preboil Volume:	1.031
Potential ABV:	7.0%	SG Temperature (F):	152
Actual ABV:	5.8%	Corrected SG:	1.050

Brewing			
Batch Size (gal):	5.50	Desired Sparge Temperature (F):	168
Total Grain Weight (lbs):	12.00	Sparge Water (gal):	3.83
Grain Temperature (F):	68	Sparge Water Temperature (F):	179
Mash Ratio (qts/lb):	1.25	Estimated Preboil Volume (gal):	7.59
Mash/Lauter Deadspace (gal):	0.25	Boil Time (min):	60
Total Water Needed (gal):	9.34	Evaporation Rate (%):	13%
Desired Mash Temperature (F):	154	Estimated Evaporation Loss (gal):	0.99
Strike Water (gal):	3.75	Trub Loss (gal):	1.10
Strike Temperature (F):	171	Volume Left in Kettle (gal):	0.10
Grain Absorption (gal):	1.50	Actual Evaporation Rate (%):	13%
Mash-out Temperature (F):	151	Actual Evaporation Loss (gal):	1.00
Mash-out Water (gal):	1.76		
Estimated First Runnings (gal):	3.76		

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

User Variables	
Calories per Pint:	190
12 oz. Bottles Required:	55.4
DME for Carbonation (oz.):	6.52
Estimated Preboil SG:	1.053
Actual Attenuation (%):	76.60%
Bottle Top Code:	HM

Carbonation	
CO2 Volume:	2.45
Bottling Temperature (F):	72
Priming Sugar (oz):	4.66
Forced Carbonation (lbs):	29.2

Inventory	
Bottles Remaining:	2
Gallons Remaining:	0.19
Date Checked:	05/12/10

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

Yeast Required	
Cell Count (billions):	204
Vials (White Labs/Wyeast):	1.7
Dry Yeast (g):	11
Starter Volume (mL):	2000
DME Required (oz):	7.00
Vials Required (w/ Starter):	1.2

BREW DAY

Single Infusion Mash (with Mash-out) and Batch Sparge Brew Schedule	
Heat 3.75 gallons of mash water to 171F	
Add grain and mash at 154F for 60 minutes	
At T-40 to mash-out, heat 1.76 gallons of mash-out water on the stove to 210F	
At T-25 to mash-out, heat 3.83 gallons of sparge water in the kettle to 179F	
Mash-out with 1.76 gallons, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 3.76 gallons)	
Add 3.83 gallons to lauter tun, mix, hold for 10 minutes, and sparge	
Vorlauf and collect second runnings (approx. 3.83 gallons)	
Boil for a total of 60 minutes with the following hop schedule:	
0.4 oz. Magnum @60 minute(s)	
0.5 oz. Perle (US) @60 minute(s)	
1 oz. Cascade @10 minute(s)	
2 oz. Cascade @0 minute(s)	

Notes	
My SNPA clone.	
SNPA is 5.6% ABV, OG 1.053, FG 1.011, 37 IBU.	
Manifold came off when adding strike water so maybe lost 1-2 degrees.	
Mash temp started at 153F average.	
Mash-out water started boiling at T-8 (next time start at T-32 or so).	
Sparge water reached target temp at T-5 (next time start at T-15 or so).	
In fermenter: 14.5% ball, 7.5% potential ABV.	
Volumes hit pretty much dead on.	
Temps were a bit low, particularly at mash-out.	
OG higher than expected; 75% efficiency instead of predicted 68%!	
2000 mL starter seems a bit much; next time maybe go for 1000 mL.	
Nice krausen still on the beer at racking; skimmed it and racked.	
Taste test at racking: pretty much cloned, slightly more bitter than SNPA.	
Taste at bottling very close to SNPA.	
A great brew. Nice maltiness. Want more hop aroma though.	