

BREWSHEET v2.1 (2011-01-04)

Batch			
Brew Name:	She's Got Balls Double ESB v2		
Bottle Top Code:	Calories per Pint:	225	
Estimated OG:	1.070	Actual OG:	1.067
Estimated FG:	1.017	Actual FG:	1.019
Estimated IBU:	60	Actual IBU:	67
Estimated SRM:	15	Actual SRM:	15
Brew Date:	01/24/11	Collected (gal):	5.00
Rack Date:	02/07/11	Racked (gal):	5.00
Bottle Date:	02/17/11	Bottled (gal):	5.00

BJCP Style Guidelines	
Style:	Extra Special/Strong Bitter (English Pale Ale)
Code:	8C
OG:	1.048-1.060
FG:	1.010-1.016
IBU:	30.0-50.0
SRM:	6.0-18.0
ABV:	4.6-6.2%
CO2:	0.7-1.3

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	73%
Batch Size:	70%
Into Boiler:	86%
Into Fermenter:	64%

Yeast Strain	
Yeast Strain:	White Labs WLP007 (English Ale)
Type:	English Ale
Attenuation (%):	70-80%
Actual Attenuation (%):	71%
Fermentation Temp (F):	65-70F
Flocculation:	medium-high

Yeast Amounts	
Cell Count (billions):	288
Vials (White Labs/Wyeast):	2.4
Dry Yeast (g):	14
Starter Volume (mL):	
DME Required (oz)	
Vials Required (w/ Starter):	

ON BREW DAY	
Heat 4.77 gallons of strike water to 175F	
Add grain and mash at 155F for 60 minutes	
Mash-out with 2.21 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 4.82 gallons)	
Add 5.14 gallons at 182F to lautner tun and sparge	
Vorlauf and collect second runnings (approx. 5.14 gallons)	
Boil for a total of 110 minutes with the following hop schedule:	
1.5 oz. Challenger (UK) @110 minute(s)	
1.5 oz. Kent Golding @40 minute(s)	
1.5 oz. Fuggle (US) @40 minute(s)	
1.5 oz. Kent Golding @0 minute(s)	
1.5 oz. Fuggle (US) @0 minute(s)	

Summary	
She's Got Balls Double ESB v2	
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Batch Size: 6.00 gal (9.96 gal preboil)	
Estimated OG: 1.070 SG (actual: 1.067 SG)	
Estimated FG: 1.017 SG (actual: 1.019 SG)	
Estimated IBUs: 60 (Finesth; actual: 67)	
Estimated Color: 13 SRM (actual: 13 SRM)	
Brewhouse Efficiency: 73% (actual: 70%)	
Boil Time: 110 minutes	
<b>Grains:</b>	
13.75# Maris Otter Malt (4.0L) (90.16%)	
1.00# British carastan (34.0L) (6.56%)	
0.50# Caramel/Crystal 90L (90.0L) (3.28%)	

Grain	Pounds	Potential	SG Share	Color	% Bill
Maris Otter Malt	13.75	1.038	0.064	4.0	90.16%
British carastan	1.00	1.035	0.004	34.0	6.56%
Caramel/Crystal 90L	0.50	1.034	0.002	90.0	3.28%

Brewing			
Batch Size (gal):	6.00	Estimated First Runnings (gal):	4.82
Total Grain Weight (lbs):	15.25	Desired Sparge Temperature (F):	170
Grain Temperature (F):	64	Sparge Water (gal):	5.14
Mash Ratio (qts/lb):	1.25	Sparge Water Temperature (F):	182
Mash/Lauter Deadspace (gal):	0.25	Estimated Preboil Volume (gal):	9.96
Total Water Needed (gal):	12.11	Boil Time (min):	110
Desired Mash Temperature (F):	155	Evaporation Rate (gal/hr):	1.75
Strike Water (gal):	4.77	Estimated Evaporation Loss (gal):	3.21
Strike Temperature (F):	175	Trub Loss (gal):	0.75
Grain Absorption (gal):	1.91	Volume Left in Kettle (gal):	0.00
Mash-out Temperature (F):	154	Actual Evaporation Rate (gal/hr):	1.55
Mash-out Water (gal):	2.21	Actual Evaporation Loss (gal):	2.85

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Challenger (UK)	7.0%	1.50	110	27.5	15.79%
Kent Golding	5.0%	1.50	40	15.9	15.79%
Fuggle (US)	5.1%	1.50	40	16.2	15.79%
Kent Golding	5.0%	1.50	0	0.0	15.79%
Fuggle (US)	5.1%	1.50	0	0.0	15.79%
Kent Golding	5.0%	2.00	dry	0.0	21.05%

Gravity		Collections	
Potential OG:	1.096	First Runnings (gal):	5.00
OG:	1.067	SG of First Runnings:	1.072
OG Temperature (F):	60	SG Temperature (F):	60
Corrected OG:	1.067	Corrected SG:	1.072
SG at Racking:		Second Runnings (gal):	4.10
SG Temperature (F):		SG of Second Runnings:	1.028
Corrected SG:		SG Temperature (F):	60
FG:	1.020	Corrected SG:	1.028
FG Temperature (F):	50	Estimated Preboil SG:	1.052
Corrected FG:	1.019	Preboil Volume (gal):	9.10
Potential ABV (%):	9.2%	SG of Preboil Volume:	1.054
Actual ABV (%):	6.2%	SG Temperature (F):	60
IBU to Gravity Ratio:	0.99	Corrected SG:	1.054

Diacetyl Rest		Carbonation	
Target Fermentation Completion:		CO2 Volume:	1.00
Target SG for Diacetyl Rest:		Bottling Temperature (F):	
		Priming Sugar (oz):	
		DME (oz):	
		Forced Carbonation (lbs):	

Notes	
Real Ale Phoenix: 7.2%; 50 IBUs	2/17: on 30 PSI for 24 hours, then to 15 PSI for the weekend; try on 2/21.
Used 2 jars of WLP007 washed from Soul Stripper	4/5: May decide to bottle this batch and let it age since it has "funk."
Substituted Fuggle for Phoenix for this version since it's "harder" to get.	5/15: dumped, horrible flavor and aroma; again on washed yeast.
Will try dry hopping this time with Kent Goldings.	I don't think I'll wash yeast again until my method is good.
Next time lower efficiency for heavily hopped beers to account for hop absorption.	
Actual IBUs is nearer 61 than 67 due to hop absorption.	
Decided to lengthen boil for better OG and for whirlfloc and fermox yeast nutrient.	
Whirlfloc did a pretty good job at coagulating proteins in the keggie.	
I was able to drain pretty much everything, leaving only goop at the bottom!	
2/7: dry hopped in primary.	
2/17: nice maltiness and bitterness; good hop aroma and flavor.	

User Variables	
12 oz. Bottles Required:	51
Primary Fermentation Temp. (F):	66
Secondary Fermentation Temp (F):	71
FNH IBU Factor (%):	10%
Strike Temperature Factor (F):	5
Sparge Temperature Factor (F):	4
Specific Gravity (P):	16.3
Specific Gravity (SG):	1.067

Yeast:	
White Labs WLP007 (English Ale)	
<b>Mash/Sparge Schedule:</b>	
Single Infusion, 155F; Batch Sparge	
Mash for 60 min at 155F w/ 4.77 gal of water at 175F	
Mashout w/ 2.21 gal of water at 210F; hold for 10 min	
Batch sparge w/ 5.14 gal of water at 182F; hold for 10 min	
<b>Fermentation Schedule:</b>	
Primary Fermentation: 14 days @66F	
Secondary Fermentation: 10 days @71F	