

BREWSHEET v2.0 (2010-06-17)

Batch			
Brew Name:	She's Got Balls Double ESB		
Bottle Top Code:	Calories per Pint:	217	
Estimated OG:	1.070	Actual OG:	1.065
Estimated FG:	1.018	Actual FG:	1.018
Estimated IBU:	51	Actual IBU:	52
Estimated SRM:	15	Actual SRM:	16
Brew Date:	09/19/10	Collected (gal):	5.60
Rack Date:	10/03/10	Racked (gal):	
Bottle Date:	10/03/10	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:	8.0-18.0
ABV:	4.6-6.2%
CO2:	0.7-1.3

Inventory	
Bottles:	
Gallons:	
Date Checked:	

Efficiency	
Brewhouse:	73%
Batch Size:	68%
Into Boiler:	84%
Into Fermenter:	70%

Yeast Strain	
Yeast Strain:	White Labs WLP007 (English Ale)
Type:	English Ale
Attenuation (%):	70-80%
Actual Attenuation (%):	72%
Fermentation Temp (F):	65-70F
Flocculation:	medium-high

Yeast Amounts	
Cell Count (billions):	265
Vials (White Labs/Wyeast):	2.2
Dry Yeast (g):	13
Starter Volume (mL):	1100
DME Required (oz):	3.85
Vials Required (w/ Starter):	2.0

ON BREW DAY	
Heat 5.04 gallons of strike water to 166F	
Add grain and mash at 152F for 60 minutes	
Mash-out with 2.62 gallons at 210F, mix and hold for 10 minutes	
Vorlauf and collect first runnings (approx. 5.47 gallons)	
Add 2.3 gallons at 193F to lauter tun and sparge	
Vorlauf and collect second runnings (approx. 2.3 gallons)	
Boil for a total of 90 minutes with the following hop schedule:	
1 oz. Challenger (UK) @90 minute(s)	
1 oz. Kent Golding @45 minute(s)	
1 oz. Kent Golding @20 minute(s)	
0.25 oz. Phoenix (UK) @10 minute(s)	
1.75 oz. Phoenix (UK) @0 minute(s)	

Summary	
She's Got Balls Double ESB	

Batch Size: 5.50 gal (7.76 gal preboil)	
Estimated OG: 1.070 SG (actual: 1.065 SG)	
Estimated FG: 1.018 SG (actual: 1.018 SG)	
Estimated IBUs: 51 (Finest; actual: 52)	
Estimated Color: 15 SRM (actual: 15 SRM)	
Brewhouse Efficiency: 73% (actual: 68%)	
Boil Time: 90 minutes	

Grains:	
14.00#	Pale Ale malt (90.32%)
1.00#	British carastan (6.45%)
0.50#	Caramel/Crystal 150L (3.23%)

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Ale malt	14.00	1.034	0.063	3.5	90.32%
British carastan	1.00	1.035	0.005	34.0	6.45%
Caramel/Crystal 150L	0.50	1.033	0.002	150.0	3.23%

Hop	Alpha %	Ounces	Boil Time	IBU	% Bill
Challenger (UK)	7.0%	1.00	90	19.7	20.00%
Kent Golding	7.2%	1.00	45	17.4	20.00%
Kent Golding	7.2%	1.00	20	11.5	20.00%
Phoenix (UK)	10.0%	0.25	10	2.4	5.00%
Phoenix (UK)	10.0%	1.75	0	0.0	35.00%

Brewing			
Batch Size (gal):	5.50	Estimated First Runnings (gal):	5.47
Total Grain Weight (lbs):	15.50	Desired Sparge Temperature (F):	170
Grain Temperature (F):	82	Sparge Water (gal):	2.30
Mash Ratio (qt/lb):	1.30	Sparge Water Temperature (F):	193
Mash/Lauter Deadspace (gal):	0.25	Estimated Preboil Volume (gal):	7.76
Total Water Needed (gal):	9.95	Boil Time (min):	90
Desired Mash Temperature (F):	152	Evaporation Rate (%):	13%
Strike Water (gal):	5.04	Estimated Evaporation Loss (gal):	1.51
Strike Temperature (F):	166	Trub Loss (gal):	0.75
Grain Absorption (gal):	1.94	Volume Left in Kettle (gal):	0.05
Mash-out Temperature (F):	152	Actual Evaporation Rate (%):	15%
Mash-out Water (gal):	2.62	Actual Evaporation Loss (gal):	1.80

Gravity		Collections	
Potential OG:	1.096	First Runnings (gal):	6.00
OG:	1.062	SG of First Runnings:	1.052
OG Temperature (F):	83	SG Temperature (F):	111
Corrected OG:	1.065	Corrected SG:	1.060
SG at Racking:		Second Runnings (gal):	2.20
SG Temperature (F):		SG of Second Runnings:	1.037
Corrected SG:		SG Temperature (F):	78
FG:	1.016	Corrected SG:	1.039
FG Temperature (F):	77	Estimated Preboil SG:	1.055
Corrected FG:	1.018	Preboil Volume (gal):	8.20
Potential ABV (%):	9.2%	SG of Preboil Volume:	1.051
Actual ABV (%):	6.1%	SG Temperature (F):	83
IBU to Gravity Ratio:	0.80	Corrected SG:	1.054

Diacetyl Rest		Carbonation	
Target Fermentation Completion:	75%	CO2 Volume:	2.20
Target SG for Diacetyl Rest:	1.028	Bottling Temperature (F):	
		Priming Sugar (oz):	

Fermentation	
CO2 Released During Fermentation (g):	981.16
Forced Carbonation (lbs):	

Notes	
A clone of Real Ale Phoenix Double ESB	10/14: Low carbonation; must have a leak in the keg; alcohol smell with maltiness; moderate sweet flavor with maltiness; then a bitterness that kicks you in the ass; so good!
ABV: 7.2%; IBU: 50	
English crystal malt; English hops, highlighted by Phoenix	
Use WLP007 for high attenuation; plus mash low.	
First runnings refrac = 14.2 (1.058).	
Second runnings refrac = 9.4 (1.038).	
Preboil refrac = 13.0 (1.053).	
Collected refrac = 15.9 (1.065).	
09/30: 1.020 SG; nice and malty; not too bitter.	
10/3: this will be an awesome beer I think; nice bitterness and maltiness play.	

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

Yeast:	
White Labs WLP007 (English Ale)	(English Ale)
Mash/Sparge Schedule:	
Single infusion, 152F; Batch Sparge	
Mash for 60 min at 152F w/ 5.04 gal of water at 166F	
Mashout w/ 2.62 gal of water at 210F; hold for 10 min	
Batch sparge w/ 2.30 gal of water at 193F; hold for 10 min	
Fermentation Schedule:	
Primary Fermentation: 14 days @66F	
Secondary Fermentation: 0 days @66F	