

Twee Zusters Belgian Dubbel Ale

Brewed on: 4/7/2005 Brewer: Dan Morey

Collect: 8.4 gallons US Effic: 82.2
Boil: 120 (min) Atten: 76.0
Finish: 5.7 gallons US Cost: \$25.91
Evap/hr: 1.35 gallons US Calc Method: Tinseth

	Low:	Recipe:	High:
IBU:	20	17.1	35
SRM:	10	28.2	20
ABV	3.2	7.22	7.8
OG:	1.040	1.072	1.080
FG:		1.017	

Comments:

Yeast:

WLP530 Belgian Abbey Ale

Malts / Fermentables:	Amount:	Points:	Lov:	%:	Mash?	Cost:
Belgian Aromatic	1.00 lb	1.030	19.0	7.6	M	\$0.90
Belgian Biscuit	0.25 lb	1.030	24.0	1.9	M	\$0.22
Belgian Candi Sugar Dark	1.00 lb	1.045	275.0	7.6		\$4.75
Belgian CaraMunich	0.75 lb	1.033	47.0	5.7	M	\$0.68
Belgian Caravienne	0.25 lb	1.030	23.0	1.9	M	\$0.40
Belgian Special B	0.38 lb	1.029	147.0	2.9	M	\$0.34
Moravian Pilsner	9.50 lb	1.038	1.6	72.4	M	\$7.13
Total:	13.13 lb	1.072	28.2			\$14.41

Hops:	Amount:	Type:	Alpha:	Add:	Minutes:	IBU:	Cost:
Santiam (home grown)	1.00 oz	Leaf	6	Boil	70	16.6	\$0.00
Styrian Golding	0.50 oz	Leaf	3.9	Boil	2	0.4	\$0.50
Total:	1.5 oz					17.1	\$0.50

Mash Schedule

Rest Temp:	End Temp	Method:	Time:	Directions:
59.0 F	59.0	infusion	45	Mash in with 7.6 quart US of water at 55.6 F
151.0 F	148.0	infusion	45	Add 15.3 quart US of water at 211.0 F
168.0 F	168.0	direct	10	Add direct heat until mash reaches 168.0 F.
170.0 F	170.0	fly sparge	20	Fly sparge with 17.2 quart US
Grain Temp:	70F	100 in.	Water/Grain Ratio:	0.63 :1 qt/lb
			Total Mash Vol:	28.0 quart

Carbonation:

Recipe is bottled; temperature of beer at bottling is 65.0 F. To carbonate to 2.2 volumes CO2, prime with 98.9 grams dextrose.

Cost Analysis:

Malt: \$14.41 **Total cost:**

Yeast: \$6.00
Misc.: \$0.00
Other: \$5.00

Bottles:

Bottle Size: 12 fl. ounces

\$ per Bottle: \$0.49

Notes:

Date:	Type:	Notes:
4/3/2005	Contest	Won 2nd in flight BOSS 2005 Challenge (Score 40.5)

Water Usage:

Total water:	40.1	collected:	8.4	Lost in kettle:	2
mash:	22.9	after boil:	5.7	Lost in trub:	0
sparge:	17.2	Final vol:	5.0		quart US
	quart US		gallons US		