

Sterke Druif

Brewed on: 2/21/2009 **Brewer:** Dan Morey
Collect: 7.8 gallons US **Effic:** 74.0
Boil: 90 (min) **Atten:** 81.7
Finish: 5.8 gallons US **Cost:** \$24.36
Evap/hr: 1.35 gallons US **calc Method:** Tinseth

	Low:	Recipe:	High:
IBU:	25	27.9	35
SRM:	3.5	3.6	5.5
ABV	7.0	7.32	9.0
OG:	1.065	1.068	1.080
FG:		1.012	

Comments:

Used Koska brand grape molasses purchased from Garden Fresh instead of Belgian candi sugar.

Malts / Fermentables:	Amount:	Points:	Lov:	%:	Mash?	Cost:
American Two-Row	11.00 lb	1.037	1.8	82.9	M	\$9.90
Granulated Sugar	1.00 lb	1.045	0.0	7.5		\$0.10
Grape Molasses	1.27 lb	1.038	1.0	9.6		\$0.25
Total:	13.27 lb	1.068	3.6			\$10.25

Hops:	Amount:	Type:	Alpha:	Add:	Minutes:	IBU:	Cost:
Styrian Golding	1.00 oz	Leaf	4.8	Boil	90	14.1	\$1.00
Sterling	1.00 oz	Leaf	5.5	Boil	30	11.1	\$0.65
Sterling	1.00 oz	Leaf	5.5	Boil	5	2.8	\$0.65
Total:	3.0 oz					27.9	\$2.30

Mash Schedule

Rest Temp:	End Temp	Method:	Time:	Directions:
60.1 F	60.1	infusion	20	Mash in with 4.7 quart US of water at 55.8 F
136.0 F	133.6	infusion	15	Add 6.9 quart US of water at 211.0 F
146.0 F	141.5	infusion	30	Add 2.6 quart US of water at 211.0 F
161.0 F	157.1	infusion	30	Add 6.4 quart US of water at 211.0 F
168.0 F	168.0	direct	25	Add direct heat until mash reaches 168.0 F.
170.0 F	170.0	fly sparge	60	Fly sparge with 16.7 quart US

Grain Temp: 69.8F 120 in. Water/Grain Ratio: 0.43 :1 qt/lb
Total Mash Vol: 25.3 quart

Miscellaneous Ingredients

Ingredient:	Amount:	Units:	\$/Unit:	Notes:
Yeast nutrient	3.00	tsp	0.22	Add during final 15 minutes of boil.
Irish Moss	1.00	tsp	0.15	Add during final 15 minutes of boil

Carbonation:

Recipe is bottled; temperature of beer at bottling is 32.0 F. To carbonate to 3.5 volumes CO₂, prime with 130.5 gr dextrose.

Cost Analysis:

Malt: \$10.25 **Total cost:**
Hops: \$2.30 **\$24.36**
Yeast: \$6.00
Misc.: \$0.81

Bottles:

Bottle Size: 12 fl. ounces
Bottles: 53
\$ per Bottle: \$0.46

Notes:

Date:	Type:	Notes:
2/20/2009	Planning	Based on the sugar swap experiment beer Suiker Ruilmiddel except I'm using grape molasses instead of moist dark candi sugar.
2/21/2009	Brewed	Used all the remaining grape molasses 1.27 lbs. OG was 16.4 brix (1.068). Really looking forward to this brew. Pitch at 67F, set for 68F. Raise temperature 4F per day until 84F is reached (5 days). Hold till fermentation is complete.

Water Usage:

Total water:	37.3	collected:	7.8	Lost in kettle:	2
mash:	20.7	after boil:	5.8	Lost in trub:	0
sparge:	16.7	Final vol:	5.0		
	quart US		gallons US		quart US