

Beer/Style	Cranberry Sour
Batch Size	5.5 gallons (Fermenter)
Gravity Units per Gal.	55
Total Gravity Units	303
OG	1.055
Est. FG	1.009
ABV	6.08%
IBU	7.69
SRM	4.22

Need to buy...	
<i>Hops</i>	1oz Hersbrucker
<i>Yeast</i>	OYL-605
<i>Yeast</i>	US-05 (2 packs)
<i>Lactic Acid</i>	
<i>Cranberries</i>	6.5lbs
<i>Distilled Water</i>	10 Gallons

	Grain Bill	Ingredient Gravity	Extract Potential	Extract Pot. Adj. for 75% Eff.	Pounds Needed
60.0%	White Wheat	181.80	40	30	6.06
40.0%	Pilsner	121.20	36	27	4.49

Total lbs Grain	10.55
Mash Thickness	1.5 qts/lb
Mash Water	3.95 Gallons

Strike Water	Add 4.0g (1 tsp) Gypsum, 1.7g CaCl (0.5 tsp), stir Heat 4.2 gal to 170°F, add to MLT Let Rest Until 160°F	<i>Do this before heating</i>
Mash	60 min @ 150°F	

Sparge Water	Add 5.9g (1.48 tsp) Gypsum, 2.0g (.59 tsp) CaCl, stir Heat 6 gal sparge water to 200°F	<i>Do this before heating</i>
Mash Out	Add near boiling to raise MLT temp to 168-170°F	
Vorlauf	Drain first runnings and put back in MT Once wort runs clear, start sparging	
Sparge	Sparge with 170-180°F so that water in = wort out Stop once boil volume is reached or gravity is 1.010	

Kettle Sourcing	Perform 10 min boil of wort to kill any bacteria Add lactic acid to drop wort pH to 4.0-4.4 Cool wort to 90°F - 95°F and pitch OYL-605 Cover with plastic wrap and lid, maintain 65°F - 95°F Sourcing can take up to 2 days Allow pH to drop to low 3's for desired sourness
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Boil	Boil for 10 min to kill lacto .50oz Hersbrucker	<i>60 Min</i>
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Chill	Chill to 65°F
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Yeast	Safale US-05 (2 packs)
Primary Fermenter	Ferment for 1-2 weeks in primary

Secondary Fermenter	6lbs fresh cranberries, cooked down to puree	<i>1-2 Weeks Total</i>
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