

BEER STYLE	Bohemian Pilsener (All Grain)		American Premium Lager (All Grain)		Strong Scotch Ale (All Grain)	
Brewing Date	1/1/99	1	1/9/99	2	2/6/99	3
Bottling Date	1/31/99		2/1/99		3/14/99	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	German Pilsener Malt	5 lbs	American Two-Row Malt	5 lbs	British Pale Malt	9 lbs
	Munich 10°L Malt	6 oz	Flaked Maize	1 lb	Crystal 60°L Malt	1 lb
	Crystal 40°L Malt	2 oz	Flaked Barley	4 oz	Chocolate Malt	4 oz
	Cara-Pils Malt	1.5 lbs			Peated Malt	4 oz
	Flaked Barley	4 oz			Flaked Barley	4 oz
Color, SRM	5		2.5		19.6	
Color, MCU	5		2.5		45	
Actual Color, SRM						
First Rest	10 minutes		10 minutes		10 minutes	
Water, gallons	1.63 gallons		1.50 gallons		2.38 gallons	
Temperature	134°-132°		138°		136°-138°	
Second Rest	20 minutes		20 minutes		20 minutes	
Water, gallons	0.50 gallons		0.50 gallons		0.50 gallons	
Temperature	142°-138°		148°-142°		142°-141°	
Third Rest	70 minutes		105 minutes		105 minutes	
Water, gallons	0.75 gallons		0.75 gallons		1.0 gallons	
Temperature	148°-156° (153° average)		153°-157° (153° average)		152°-156° (154° average)	
Mashout Temperature	168°		168°		168°	
Sparge Water, gallons	3.25 gallons		3.00 gallons		2.67 gallons	
Boiling Time	60 minutes		70 minutes		60 minutes	
Boiling Hops	Saaz pellets (3.0%)	2.25 oz	Hallertauer pellets (3.9%)	0.75 oz	Fuggie pellets (4.3%)	1.5 oz
Finishing Hops	Saaz pellets (3.0%)	0.75 oz	Hallertauer pellets (3.9%)	0.25 oz	-	-
IBUs	36		18		30	
Yeast	White Labs German Pilsener (WLP800) (22 oz starter)	1 vial	White Labs German Pilsener (WLP800) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial
Water/Treatment	5 gal DI, 1.13 gal tap 1 tsp Irish Moss		3 gal DI, 2.75 gal tap 1 tsp Irish Moss		all tap water 1 tsp Irish Moss	
Original Gravity						
Maximum	1.068		1.063		1.106	
Target	(80% extraction) 1.054		(80% extraction) 1.050		(80% extraction) 1.085	
Measured	1.053		(1.050 after dilution) 1.059		1.082	
Primary Gravity	1.015		1.024		1.042	
Ending Gravity	1.014		(1.015 after dilution) 1.018		1.036	
Extract Efficiency, %	78%		94%		77%	
Apparent Attenuation	74%		69%		56%	
BU/GU	0.68		0.31		0.37	
Potential Alcohol, %	wt% 4.09%	vol% 5.12%	wt% 4.30%	vol% 5.38%	wt% 4.83%	vol% 6.04%
Lock Installed	1/7/99		1/16/99		2/12/99	
Secondary Fermenter	1/10/99		1/19/99		2/12/99	
Priming Sugar, cups	Corn Sugar 1/2		Corn Sugar 1/2		Corn Sugar 1/3	
Water, cups	2		2		2	
Number of Bottles	29		34		27	
Comments						
Brewing	Boiling hops added at 50 minutes. Finishing hops at 10 minutes (1/4 oz) and 2 minutes (1/2 oz).		Boiling hops added at 60 minutes. Finishing hops at 10 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation beginning at 24 hours.		Fermentation beginning at 24 hours. Beer diluted with 1/2 gallon of water at bottling.		Fermentation active at 17 hours.	
Beer	Silver medal (first place) for Classic Pilsners at 6th AFCHBC. Third at AHA NHC First Round Regional.		Silver medal (first place) for American Lagers at 6th AFCHBC.			
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Vanille Framboise (All Grain)		Traditional Bock (All Grain)		Scottish Heavy Ale (All Grain)	
Brewing Date	2/21/99 4		3/20/99 6		5/2/99 6	
Bottling Date	4/11/99		4/11/99		5/26/99	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	3.0 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt	3 lbs	American Two-Row Malt	7 lbs	British Pale Malt	3.5 lbs
	Wheat Malt	2.5 lbs	Munich 10°L Malt	1 lb	Crystal 60°L Malt	1 lb
	Crystal 60°L Malt	8 oz	Crystal 40°L Malt	1 lb	Special B Malt 125°L	2 oz
	Flaked Barley	8 oz	Chocolate Malt	4 oz	Peated Malt	2 oz
	Vanilla Extract	1 oz			Flaked Barley	4 oz
	Frozen raspberries	3 lbs				
	Cranberry-raspberry concentrate	1 lb				
Color, SRM	10.5		18		15.9	
Color, MCU	10.9		39		28.1	
Actual Color, SRM						
First Rest	10 minutes		10 minutes		10 minutes	
Water, gallons	1.63 gallons		2.10 gallons		1.25 gallons	
Temperature	140°-142°		140°-136°		140°-138°	
Second Rest	15 minutes		20 minutes		25 minutes	
Water, gallons	0.50 gallons		0.50 gallons		0.50 gallons	
Temperature	146°-143°		146°-142°		148°-138°	
Third Rest	110 minutes		65 minutes		65 minutes	
Water, gallons	0.75 gallons		1.0 gallon		0.75 gallons	
Temperature	148°-156° (154° average)		156°-157° (156° average)		152°-157° (155° average)	
Mashout Temperature	169°		168°		170°	
Sparge Water, gallons	2.87 gallons		2.70 gallons		3.0 gallons	
Boiling Time	60 minutes		75 minutes		60 minutes	
Boiling Hops	Fuggle pellets (4.2%)	0.5 oz	Hallertauer pellets (3.9%)	1.0 oz	Fuggle pellets (4.5%)	0.5 oz
	(old, sun-baked hops)					
Finishing Hops	-		-		-	
IBUs	12		20.7		13.4	
Yeast	White Labs California Ale (WLP001) (22 oz starter), Wyeast Lambic Blend (#3278) (12 oz starter)	1 vial 1 pack	White Labs German Lager (WLP830) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial
Water/Treatment	5 gal DI, 0.75 gal tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss	
Original Gravity						
Maximum	1.065		1.090		1.050	
Target	(80% extraction) 1.052		(80% extraction) 1.072		(80% extraction) 1.040	
Measured	1.058		1.073		1.043	
Primary Gravity	1.014		1.027		1.013	
Ending Gravity	1.007		1.022		1.013	
Extract Efficiency, %	89%		81%		86%	
Apparent Attenuation	88%		70%		70%	
BU/GU	0.21		0.28		0.31	
Potential Alcohol, %	wt% 5.36%	vol% 6.69%	wt% 5.35%	vol% 6.69%	wt% 3.15%	vol% 3.94%
Lock Installed	2/26/99		3/26/99		5/6/99	
Secondary Fermenter	3/3/99		3/28/99		5/7/99	
Primary Fermenter Temp						
Secondary Fermenter Temp						
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/2	Corn Sugar	1/3
Water, cups	2		2		2	
Number of Bottles	28		28		28	
Comments						
Brewing	Hops added at 50 minutes.		Boiling hops added at 60 minutes.		Hops added at first wort.	
Fermentation	Fermentation beginning at 24 hours. Raspberries, concentrate, vanilla, and lambic yeast added to secondary. Lactic acid (1 oz) and oak chips (1/2 oz) added during transfer to tertiary fermenter (3/26) (1.017 gravity)		Fermentation beginning at 24 hours.		Fermentation active at 15 hours.	
Beer	Second place at '99 Del Mar Fair in Lambics. First in Belgians at 12th SoCal Championships. First in Belgians at 1999 QUAFF Oktoberfest (Best of Show). First in Lambics at 1999 Barley Litterate Oktoberfest (BOS Runner-up). Second in Lambics at AFC2000. Third in AHA Lambic Club-Only. First in Lambics at 2000 Del Mar					
Source of Recipe	Based on Lambic, by Jean-Xavier Guinard, page 125.		Custom recipe.		Custom recipe.	

BEER STYLE	Irish Dry Stout (All Grain)		Bamberg Blonde (All Grain)		Weizen (All Grain)	
Brewing Date	5/30/99	7	6/6/99	8	6/13/99	9
Bottling Date	6/13/99		6/28/99		7/3/99	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	British Pale Malt 4 lbs Crystal 60°L Malt 1 lb Chocolate Malt 4 oz Black Malt 8 oz Roasted Barley 8 oz		Rauchmalt 3 lbs Munich 10°L Malt 2 lbs German Pilsener Malt 2 lbs Flaked Barley 2 oz		Wheat Malt 4 lbs German Pilsener Malt 2.5 lbs Flaked Barley 4 oz	
Color, SRM	42		15.6		3.1	
Color, MCU	146		26.6		3.1	
Actual Color, SRM						
First Rest	15 minutes		15 minutes		15 minutes	
Water, gallons	1.4 gallons		1.60 gallons		1.5 gallons	
Temperature	127°-125°		127°-124°		134°-130°	
Second Rest	15 minutes		15 minutes		10 minutes	
Water, gallons	0.75 gallons		0.75 gallons		0.75 gallons	
Temperature	144°-142°		144°-140°		144°-140°	
Third Rest	65 minutes		60 minutes		60 minutes	
Water, gallons	0.75 gallons		0.75 gallon		0.75 gallon	
Temperature	154°-159° (157° average)		152°-159° (155° average)		152°-159° (156° average)	
Mashout Temperature	168°		172°		170°	
Sparge Water, gallons	3 gallons		2.80 gallons		3.0 gallons	
Boiling Time	60 minutes		60 minutes		60 minutes	
Boiling Hops	Fuggle pellets (4.3%) 1 oz Styrian Golding pellets (4.0%) 0.5 oz		Tettnanger pellets (4.8%) 0.75 oz		Tettnanger pellets (4.8%) 0.5 oz	
Finishing Hops	Styrian Golding pellets (4.0%) 0.5 oz		Tettnanger pellets (4.8%) 0.25 oz			
IBUs	39		23.6		12.7	
Yeast	White Labs Irish Ale (WLP004) (22 oz starter) 1 vial		White Labs San Francisco Lager (WLP810) (22 oz starter) 1 vial		White Labs Hefeweizen (WLP300) (22 oz starter) 1 vial	
Water/Treatment	all tap water no Irish Moss		all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss	
Original Gravity						
Maximum	1.057		1.068		1.070	
Target	(80% extraction) 1.046		(80% extraction) 1.055		(80% extraction) 1.056	
Measured	1.050		1.057		1.058	
Primary Gravity	1.020		1.022		1.018	
Ending Gravity	1.018		1.020		1.015	
Extract Efficiency, %	88%		84%		83%	
Apparent Attenuation	64%		65%		74%	
BU/GU	0.78		0.41		0.22	
Potential Alcohol, %	wt% 3.36% vol% 4.20%		wt% 3.88% vol% 4.86%		wt% 4.52% vol% 5.64%	
Lock Installed	6/1/99		6/9/99		6/16/99	
Secondary Fermenter	6/3/99		6/12/99		6/18/99	
Priming Sugar, cups	Corn Sugar 1/3		Corn Sugar 1/2		Corn Sugar 1/2	
Water, cups	2		2		2	
Number of Bottles	27		29		28	
Comments						
Brewing	Fuggles added at 60 minutes. Styrian Golding added at 50 and 10 minutes.		Hops added at first wort and 15 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation active at 15 hours.		Fermentation beginning at 24 hours.		Fermentation active at 15 hours.	
Beer	Second in Stouts at 1999 Barley Literate Oktoberfest				Third in German Wheats at 1999 QUAFF Oktoberfest. Second in German Wheats at 1999 Pacific Brewers Cup. First in Wheats at 1999 Farmers Fair. Second in German Wheats at 1999 Barley Literate Oktoberfest.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	English Light Mild (All Grain)		English Ordinary Bitter (All Grain)		Imperial Stout (All Grain)	
Brewing Date	7/4/99 10		7/10/99 11		7/17/99 12	
Bottling Date	7/24/99		8/1/99		8/8/99	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	British Pale Malt	4 lbs	British Pale Malt	4 lbs	British Pale Malt	10 lbs
	Crystal 60°L Malt	8 oz	Crystal 40°L Malt	8 oz	Crystal 60°L Malt	8 oz
	Flaked Barley	2 oz	Flaked Barley	2 oz	Roasted Barley	8 oz
					Black Malt	8 oz
					Flaked Barley	2 oz
Color, SRM	10.9		8.1		36	
Color, MCU	11.5		8.1		121	
Actual Color, SRM						
First Rest	20 minutes		20 minutes		15 minutes	
Water, gallons	1.16 gallons		1.16 gallons		2.6 gallons	
Temperature	130°-127°		129°-127°		128°-127°	
Second Rest	70 minutes		70 minutes		20 minutes	
Water, gallons	1.25 gallons		1.0 gallons		1.0 gallon	
Temperature	160°-153° (155° average)		158°-150° (154° average)		142°-140°	
Third Rest					55 minutes	
Water, gallons					1.25 gallons	
Temperature					154°-152° (154° average)	
Mashout Temperature	168°		168°		168°	
Sparge Water, gallons	3.1 gallons		3.3 gallons		2.4 gallons	
Boiling Time	70 minutes		75 minutes		100 minutes	
Boiling Hops	Kent Golding pellets (6.4%)	0.5 oz	Kent Golding pellets (6.4%)	0.75 oz	Irish Northdown pellets (9.4%)	1 oz
					Fuggle pellets (4.5%)	0.5 oz
Finishing Hops			Kent Golding pellets (6.4%)	0.25 oz	Fuggle pellets (4.5%)	0.5 oz
IBUs	17.6		30.4		57	
Yeast	White Labs English Ale (WLP002) (22 oz starter)	1 vial	White Labs English Ale (WLP002) slurry from light mild brew	1 cup	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial
Water/Treatment	all tap water 1 tsp Irish Moss		all tap water no Irish Moss		all tap water 1 tsp Irish Moss	
Original Gravity						
Maximum	1.047		1.047		1.112	
Target	(80% extraction)	1.038	(80% extraction)	1.037	(80% extraction)	1.090
Measured	1.043		1.042		1.088	
Primary Gravity	1.017		1.015		1.032	
Ending Gravity	1.015		1.014		1.026	
Extract Efficiency, %	91%		89%		79%	
Apparent Attenuation	65%		67%		70%	
BU/GU	0.41		0.72		0.65	
Potential Alcohol, %	wt%	vol%	wt%	vol%	wt%	vol%
	2.94%	3.68%	2.94%	3.68%	6.51%	8.14%
Lock installed	7/8/99		7/13/99		7/20/99	
Secondary Fermenter	7/10/99		7/16/99		7/24/99	
Priming Sugar, cups	Corn Sugar	1/3	Corn Sugar	1/3	Corn Sugar	1/3
Water, cups	2		2		2	
Number of Bottles	28		29		28	
Comments						
Brewing	Hops added at 50 minutes.		Hops added at first wort and 5 minutes.		Boiling hops added at 60 minutes. Aroma hops added at 5 minutes.	
Fermentation	Fermentation beginning at 6 hours, and active at 15 hours.		Fermentation beginning at 6 hours, and active at 15 hours.		Fermentation very active at 16 hours.	
Beer			Third in English Ales at 1999 Pacific Brewers Cup. Second in Bitters at 1999 Farmers Fair.		First in Stouts at 1999 Farmers Fair.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	English Old Ale (All Grain)		Tripel (All Grain)		Hazelnut Coffee Stout (All Grain)	
Brewing Date	8/7/99 13		8/21/99 14		9/5/99 15	
Bottling Date	8/29/99				9/26/99	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	British Pale Malt	9 lbs	Belgian Pilsener Malt	10.5 lbs	British Pale Malt	10 lbs
	Crystal 60°L Malt	1 lb	Cara-Pils Malt	4 oz	Crystal 60°L Malt	8 oz
	Munich Malt	1 lb	Flaked Barley	6 oz	Roasted Barley	8 oz
	Chocolate Malt	2 oz			Black Malt	8 oz
	Flaked Barley	2 oz	Cane sugar (added to boil)	1 lb	Flaked Barley	2 oz
					Hazelnut Coffee (in 10 cups)	4 oz
Color, SRM	18		5.2		40	
Color, MCU	37		5.2		139	
Actual Color, SRM						
First Rest	20 minutes		15 minutes		20 minutes	
Water, gallons	2.5 gallons		2.08 gallons		2.62 gallons	
Temperature	137°-132°		127°-124°		136°-135°	
Second Rest	70 minutes		15 minutes		70 minutes	
Water, gallons	1.25 gallons		1 gallon		1.25 gallon	
Temperature	154°-148° (150° average)		144°		152°-150° (152° average)	
Third Rest			60 minutes			
Water, gallons			1 gallon			
Temperature			154°-150° (151° average)			
Mashout Temperature	170°		169°		168°	
Sparge Water, gallons	2.83 gallons		2.61 gallons		2.81 gallons	
Boiling Time	60 minutes		60 minutes		120 minutes	
Boiling Hops	Northern Brewer pellets (8.8%)	1 oz	Styrian Golding pellets (2.7%)	1 oz	Northern Brewer pellets (8.8%)	1 oz
			U.S. Saaz pellets (3.4%)	0.5 oz		
Finishing Hops			U.S. Saaz pellets (3.4%)	0.5 oz		
IBUs	40		19		40	
Yeast	White Labs Irish Ale (WLP004)	1 vial (22 oz starter)	Wyeast Belgian Abbey (1214)	1 pack (22 oz starter); White Labs Trappist (WLP500)	White Labs Irish Ale (WLP004)	1 vial (22 oz starter)
Water/Treatment	all tap water		6 gal DI, 0.7 gal tap		all tap water	
	1 tsp Irish Moss		1 tsp Irish Moss		1 tsp Irish Moss	
Original Gravity						
Maximum	1.113		1.117		1.119	
Target	(80% extraction) 1.090		(80% extraction) 1.096		(80% extraction) 1.096	
Measured	1.088		1.100		1.084	
Primary Gravity	1.030		1.072		1.030	
Ending Gravity	1.026		1.072		1.026	
Extract Efficiency, %	78%		(81% extraction w/o sugar) 85%		71%	
Apparent Attenuation	70%		28%		69%	
BU/GU	0.45		0.19		0.48	
Potential Alcohol, %	wt%	vol%	wt%	vol%	wt%	vol%
	6.51%	8.14%	2.94%	3.68%	6.09%	7.61%
Lock Installed	8/10/99		8/24/99		9/7/99	
Secondary Fermenter	8/13/99		8/27/99		9/11/99	
Priming Sugar, cups	Corn Sugar	1/3	Corn Sugar	1/2	Corn Sugar	1/3
Water, cups		2		2		2
Number of Bottles	28				29	
Comments						
Brewing	Hops added at 50 minutes.		Hops added at 50 minutes and 5 minutes.		Hops added at 50 minutes. Brewed coffee added after boil (during cooling).	
Fermentation	Fermentation very active at 16 hours.		Fermentation just beginning at 17 hours. (37-month old Wyeast!) Primary fermentation attenuation very poor. White Labs yeast added on 9/3. Tertiary fermenter on 10/2 (1.028).		Fermentation very active at 16 hours.	
Beer					Second in Specialties at 1999 Barley Literate Oktoberfest	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Liz's Traditional Mead	1999 Holiday Beer (Titanic Ale)	Belgian Twit (Wipple)
	Mead	(All Grain)	(All Grain)
Brewing Date	9/6/99 16	10/2/99 17	10/23/99 18
Bottling Date	12/5/99	10/31/99	11/21/99
Primary Fermenter	3.0 gallons	3.0 gallons	3.0 gallons
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallons
Malt	Mountain Flower Honey 10 lbs Yeast nutrients 2 tsp Citric acid 1 tsp	American Two-Row Malt 10 lbs Crystal 40°L Malt 1 lb Belgian Special B Malt 4 oz Flaked Barley 2 oz Orange Blossom Honey 12 oz	Belgian Pilsener Malt 5 lbs Red Wheat Malt 5 lbs Flaked Barley 2 oz Cane sugar (added to boil) 1 lb
Color, SRM		16.6	4.7
Color, MCU		31	4.7
Actual Color, SRM			
First Rest		20 minutes	20 minutes
Water, gallons		2.5 gallons	2.25 gallons
Temperature		136°-135°	135°-132°
Second Rest		70 minutes	70 minutes
Water, gallons		1.25 gallons	1.25 gallons
Temperature		157°-150° (155° average)	153°-152° (152° average)
Third Rest			
Water, gallons			
Temperature			
Mashout Temperature		170°	169°
Sparge Water, gallons		3.0 gallons	3 gallons
Boiling Time	15 minutes	60 minutes	65 minutes
Boiling Hops		Tettnanger pellets (4.7%) 1 oz	Styrian Golding pellets (2.7%) 0.75 oz U.S. Saaz pellets (3.4%) 0.75 oz
Finishing Hops		Tettnanger pellets (4.7%) 1 oz Cinnamon sticks (3" long) 2 Ginger 1.2 oz Bitter orange peel 0.75 oz	Styrian Golding pellets (2.7%) 0.25 oz U.S. Saaz pellets (3.4%) 0.25 oz Bitter orange peel 0.25 oz Coriander 0.5 oz
IBUs		26	22
Yeast	Red Star Champagne Dry 2 packs Yeast	White Labs California Ale 1 vial 1 (WLP001) (22 oz starter), White vial Labs Edinburgh Ale (WLP028)	White Labs Trappist (WLP500), 1 vial White Labs Belgian Wit (WLP400) 1 vial (22 oz starter)
Water/Treatment	all tap water 1 tsp Irish Moss	all tap water 1 tsp Irish Moss	5 gal DI, 1.5 gal tap 1 tsp Irish Moss
Original Gravity			
Maximum	1.107	1.116	1.109
Target	1.107	(80% extraction) 1.094	(80% extraction) 1.089
Measured	1.100	1.088	1.083
Primary Gravity	1.022	1.064	1.016
Ending Gravity	1.022	1.030	1.014
Extract Efficiency, %	93%	(75% without honey) 76%	(74% extraction w/o sugar) 76%
Apparent Attenuation	78%	66%	83%
BU/GU	0.00	0.30	0.27
Potential Alcohol, %	wt% vol% 8.19% 10.24%	wt% vol% 6.09% 7.61%	wt% vol% 7.24% 9.06%
Lock Installed	9/6/99	10/9/99	10/27/99
Secondary Fermenter	10/17/99	10/11/99	11/3/99
Primary Fermenter Temp			
Secondary Fermenter Temp			
Priming Sugar, cups	Corn Sugar 1/3	Corn Sugar 1/3	Corn Sugar 1/2
Water, cups	2	2	2
Number of Bottles	28	28	29
Comments			
Brewing		Boiling hops added at 50 minutes. Finishing hops split between 15 minutes and 2 minutes. Spices at 10 minutes.	Hops added at 50 minutes and 5 minutes. Orange peel at 15 minutes, coriander at end of boil.
Fermentation	Fermentation beginning after two days.	Starter had not started. Fermentation very slow to start, beginning at 39 hours. AleSmith "clearance" yeast. Edinburgh Ale yeast added at secondary.	Active fermentation at 17 hours.
Beer	Third in Meads at AFC2000. Third in Traditional Meads at 2000 AHA NHC First Round. Fourth in Traditional Meads at 2000 Del Mar Fair.	Very problematic beer at bottling.	Third in Belgian and French Ales at AFC2000. First in Belgian and French Ales at 2000 AHA NHC First Round.
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.

BEER STYLE	American Amber Ale (All Grain)		Millennium Barleywine (All Grain)		Bohemian Pilsner (All Grain)	
Brewing Date	11/13/99	19	11/26/99	20	12/4/99	21
Bottling Date	12/5/99		12/27/99		1/9/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt	6 lbs	American Two-Row Malt	13 lbs	German Pilsener Malt	6 lbs
	Crystal 80°L Malt	1 lb	Crystal 80°L Malt	1 lb	Munich Malt	8 oz
	Flaked Barley	2 oz	Cara-Pils Malt	1 lb	CaraPils Malt	8 oz
			Flaked Barley	2 oz	Flaked Barley	6 oz
			Brown Sugar	2 lb		
Color, SRM	14.9		15.5		4.1	
Color, MCU	23.6		28.3		4.1	
Actual Color, SRM						
First Rest	20 minutes		15 minutes		45 minutes	
Water, gallons	1.75 gallons		3.25 gallons		2.3 gallons	
Temperature	134°-130°		134°-130°		134°-124° (130° average)	
Second Rest	70 minutes		75, 105 minutes		70 minutes	
Water, gallons	1.25 gallons		2.0 gallons		~1.25 gallons decoction	
Temperature	156°-158° (157° average)		146°-156° (150° average)		140°-160° (150° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	170°		170°		169°	
Sparge Water, gallons	3.0 gallons		3.2 gallons		3.85 gallons	
Boiling Time	60 minutes		150 minutes		60 minutes	
Boiling Hops	Cascade pellets (5.4%)	1 oz	Centennial pellets (9.9%)	2 oz	Czech Saaz pellets (3.8%)	2 oz
Finishing Hops	Cascade pellets (5.4%)	1 oz	Cascade pellets (5.4%)	1 oz	Czech Saaz pellets (3.8%)	1 oz
IBUs	38.9		68		42	
Yeast	White Labs California Ale (WLP001) (22 oz starter)	1 vial	White Labs California Ale (WLP001) (22 oz starter) Red Star Champagne (dry)	1 vial 2 packs	White Labs Pilsener (WLP800) (22 oz starter)	1 vial
Water/Treatment	all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss		5 gal DI, 1.15 gal tap no Irish Moss (forgotten!)	
Original Gravity						
Maximum	1.068		1.165		1.070	
Target	(80% extraction)	1.055	(75% extraction)	1.130	(80% extraction)	1.056
Measured	1.054		1.113		1.060	
Primary Gravity	1.020		1.052		1.042	
Ending Gravity	1.018		1.030		1.024	
Extract Efficiency, %	79%		(64% extraction w/o sugar)	68%	86%	
Apparent Attenuation	67%		73%		60%	
BU/GU	0.72		0.60		0.70	
Potential Alcohol, %	wt% vol%	3.78% 4.73%	wt% vol%	8.72% 10.89%	wt% vol%	3.78% 4.73%
Lock Installed	11/17/99		12/2/99		12/10/99	
Secondary Fermenter	11/21/99		12/4/99		12/11/99	
Primary Fermenter Temp			65°		50°-52°	
Secondary Fermenter Temp			65°		50°-58°	
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/3	Corn Sugar	1/2
Water, cups	2		2		2	
Number of Bottles	29		28		28	
Comments						
Brewing	Boiling hops added at first wort. Finishing hops split between 15, 10, 5, and 2 minutes.		Two separate mashes. Boiling hops added at 120 minutes. Finishing hops split between 15, 10, 5, and 2 minutes.		Double decoction. Boiling hops at 50 minutes. Finishing hops at 10 and 2 minutes.	
Fermentation	Fermentation beginning at 8 hours.		Fermentation active at 16 hours.		Fermentation at 24 hours. Transferred to secondary was too early.	
Beer	Third in American Ales at AFC2000.					
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

23 beers in 1999  
193 beers total

BEER STYLE	Doppelbock (All Grain)		Munich Dunkel (All Grain)		Vienna (All Grain)	
Brewing Date	12/11/99 22		12/18/99 23		1/1/00 1	
Bottling Date	3/17/00		1/16/00		1/23/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	German Pilsener Malt	5 lbs	Munich Malt	6 lbs	German Pilsener Malt	4 lbs
	Munich Malt	5 lbs	American Two-Row Malt	1 lb	Munich Malt	1 lb
	CaraPils Malt	1 lb	Durst Crystal 40°L Malt	8 oz	CaraPils Malt	8 oz
	Durst Crystal 40°L Malt	1 lb	Chocolate Malt	4 oz	Durst Crystal 40°L Malt	8 oz
	Chocolate Malt	2 oz	Flaked Wheat	2 oz	Flaked Wheat	2 oz
	Flaked Barley	6 oz				
Color, SRM	18		19.4		10	
Color, MCU	38		44		10.1	
Actual Color, SRM						
First Rest	35 minutes		30 minutes		30 minutes	
Water, gallons	4.1 gallons		3.0 gallons		2.35 gallons	
Temperature	135°-131° (132° average)		135°-124° (130° average)		138°-130° (134° average)	
Second Rest	75 minutes		60 minutes		60 minutes	
Water, gallons	~2 gallons decoction		~1.6 gallons decoction		~1.3 gallons decoction	
Temperature	156°-150° (152° average)		156°-150° (152° average)		154°-158° (156° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	168°		168°		170°	
Sparge Water, gallons	3.5 gallons		3.35 gallons		3.65 gallons	
Boiling Time	110 minutes		60 minutes		60 minutes	
Boiling Hops	Northern Brewer pellets (8.8%) 0.75 oz		Tettnanger pellets (4.9%) 0.9 oz		Tettnanger pellets (4.9%) 0.9 oz	
Finishing Hops			Tettnanger pellets (4.9%) 0.1 oz		Tettnanger pellets (4.9%) 0.1 oz	
IBUs	30		22.6		24	
Yeast	White Labs German Lager (WLP830) (22 oz starter)	1 vial	White Labs German Lager (WLP830) (22 oz starter)	1 vial	White Labs Maerzen (WLP820) (22 oz starter)	1 vial
Water/Treatment	all tap Irish Moss		all tap Irish Moss		all tap no Irish Moss	
Original Gravity						
Maximum	1.120		1.073		1.062	
Target	(80% extraction) 1.090		(80% extraction) 1.058		(85% extraction) 1.052	
Measured	1.103		1.069		1.053	
Primary Gravity	1.072		1.025		1.016	
Ending Gravity	1.041		1.022		1.015	
Extract Efficiency, %	86%		95%		85%	
Apparent Attenuation	60%		68%		72%	
BU/GU	0.29		0.33		0.45	
Potential Alcohol, %	wt% 6.51%	vol% 8.14%	wt% 4.93%	vol% 6.17%	wt% 3.99%	vol% 4.99%
Lock Installed	12/18/99		12/26/99		1/7/00	
Secondary Fermenter	12/26/99		12/31/99		1/9/00	
Primary Fermenter Temp	48°-56°		48°-58°		60°	
Secondary Fermenter Temp	48°-58°		48°-58°		55°-60°	
Priming Sugar, cups	Corn Sugar 1/3		Corn Sugar 1/2		Corn Sugar 1/2	
Water, cups	2		2		2	
Number of Bottles	29		28		28	
Comments						
Brewing	Double decoction. Hops at 70 minutes.		Double decoction. Hops at 50 minutes and 5 minutes.		Double decoction. Boiling hops at 50 minutes. Finishing hops at 5 minutes.	
Fermentation	Fermentation beginning at 36 hours. Champagne yeast pitched for tertiary (1/23/2000 @1.070)		Fermentation beginning at 24 hours.		Fermentation beginning at 17 hours.	
Beer			Third in German Dark Lagers at 2000 Del Mar Fair.		First as a German Light Lager at 2000 Del Mar Fair. Fifth as an American Lager at 2000 Del Mar Fair.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	



BEER STYLE	Chocolate Porter (All Grain)		Scottish Export (All Grain)		Temecula Twit (All Grain)	
Brewing Date	1/9/00	2	2/13/00	3	3/18/00	4
Bottling Date	2/6/00		3/5/00		4/16/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt	6 lbs	British Pale Malt	5 lbs	Belgian Pilsener Malt	5 lbs
	Crystal 80°L Malt	1 lb	Crystal 80°L Malt	8 oz	Belgian Wheat Malt	5 lbs
	Chocolate Malt	1 lb	Chocolate Malt	4 oz	Flaked Barley	2 oz
	Flaked Wheat	3 oz	Flaked Barley	6 oz		
			Peated Malt	2 oz	Cane sugar (added to boil)	1 lb
Color, SRM	34.4		18		4.7	
Color, MCU	112		37		4.7	
Actual Color, SRM						
First Rest	25 minutes		30 minutes		25 minutes	
Water, gallons	2.0 gallons		1.56 gallons		2.25 gallons	
Temperature	136°-134°		132°-127°		140°-136°	
Second Rest	70 minutes		60 minutes		70 minutes	
Water, gallons	1.5 gallons		1.5 gallons		1.25 gallons	
Temperature	146°-154° (148° average)		155°-159° (156° average)		155°-149° (152° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	166°		166°		170°	
Sparge Water, gallons	2.6 gallons		3.0 gallons		3 gallons	
Boiling Time	100 minutes		75 minutes		70 minutes	
Boiling Hops	Cascade pellets (6.2%)	0.75 oz	Kent Golding pellets (6.1%)	0.75 oz	Styrian Golding pellets (4.0%)	0.75 oz
	Unsweetened chocolate	8 oz			U.S. Saaz pellets (4.5%)	0.5 oz
Finishing Hops	Cascade pellets (6.2%)	0.25 oz	Kent Golding pellets (6.1%)	0.25 oz	U.S. Saaz pellets (4.5%)	0.5 oz
					Coriander	0.5 oz
					Bitter orange peel	0.25 oz
IBUs	28.1		25.2		25.1	
Yeast	White Labs California Ale (WLP001) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial	White Labs Trappist (WLP500), White Labs Belgian Wit (WLP400) (22 oz)	1 vial 1 vial
Water/Treatment	all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss		5 gal DI, 1.5 gal tap no Irish Moss	
Original Gravity						
Maximum	1.078		1.062		1.109	
Target	(80% extraction) 1.062		(80% extraction) 1.050		(80% extraction) 1.089	
Measured	1.066		1.053		1.083	
Primary Gravity	1.018		1.020		1.030	
Ending Gravity	1.018		1.019		1.018	
Extract Efficiency, %	85%		85%		(73% extraction w/o sugar) 76%	
Apparent Attenuation	73%		64%		78%	
BU/GU	0.43		0.48		0.30	
Potential Alcohol, %	wt% vol%		wt% vol%		wt% vol%	
	5.04% 6.30%		3.57% 4.46%		6.82% 8.53%	
Lock Installed	1/14/00		2/19/00		3/25/00	
Secondary Fermenter	1/16/00		2/19/00		3/29/00	
Primary Fermenter Temp	65°		65°		65°	
Secondary Fermenter Temp	65°		65°		65°	
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/3	Corn Sugar	1/2
Water, cups	2		2		2	
Number of Bottles	27		30		one 3-gallon keg	
Comments						
Brewing	Hops added at 70 and 2 minutes.		Hops added at 50 and 2 minutes.		Hops added at 50 minutes and 5 minutes. Orange peel at 15 minutes, coriander at end of boil.	
Fermentation	Fermentation beginning at 16 hours.		Fermentation beginning at 16 hours.		Active fermentation at 17 hours.	
Beer	Second in Specialty at AFC2000. First in Porters and Best of Show at Flightline 2000 (Tucson).		Second in Scottish Ales at 2000 AHA NHC First Round. Second in Scottish Ales at 2000 Del Mar Fair.			
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Berliner Weisse (All Grain)		Dry Stout (All Grain)		Blackberry Lambic (All Grain)	
Brewing Date	3/26/00 5		5/13/00 6		5/27/00 7	
Bottling Date	4/16/00		6/4/00		7/2/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		3.0 gallons	
Malt	Wheat Malt 2 lbs	British Pale Malt 4 lbs	American Tow-Row Malt 3 lbs			
	German Pilsener Malt 2 lbs	Crystal 80°L Malt 8 oz	Wheat Malt 2.5 lbs			
	Flaked Barley 4 oz	Chocolate Malt 11 oz	Crystal 60°L Malt 8 oz			
		Roasted Barley 1 lb	Flaked Barley 8 oz			
		Flaked Barley 5 oz	Marion blackberries (frozen) 5 lbs			
			Cranberry-raspberry concentrate 1 lb			
Color, SRM	2		44		11.1	
Color, MCU	2		156		11.1	
Actual Color, SRM						
First Rest	18 minutes		15 minutes		10 minutes	
Water, gallons	1.17 gallons		1.63 gallons		1.46 gallons	
Temperature	129°-125°		140°-132°		140°-136°	
Second Rest	60 minutes		75 minutes		15 minutes	
Water, gallons	1.0 gallons		1.0 gallons		0.50 gallons	
Temperature	160°-153° (156° average)		154°-148° (150° average)		148°-145° (146° average)	
Third Rest					65 minutes	
Water, gallons					0.75 gallons	
Temperature					154°-144° (150° average)	
Mashout Temperature	170°		169°		170°	
Sparge Water, gallons	2.68 gallons		3.18 gallons		2.82 gallons	
Boiling Time	30 minutes		60 minutes		60 minutes	
Boiling Hops	Tettnanger pellets (4.9%) 0.25 oz	Irish Northdown pellets (9.4%) 1 oz	Perle pellets (7.3%) 0.3 oz		(old, left in sun for a day)	
Finishing Hops						
IBUs	13.3		48		12.4	
Yeast	White Labs American Hefeweizen 1 vial (WLP320) (22 oz starter)	White Labs Irish Ale (WLP004) 1 vial (22 oz starter)	White Labs California Ale (WLP001) 1 vial (22 oz starter), Wyeast Lambic Blend (#3278) (12 oz starter)			
Water/Treatment	4 gal DI, 0.85 gal tap water 1 tsp Irish Moss	all tap water 1 tsp Irish Moss @ 15 minutes	5 gal DI, 0.55 gal tap water 1 tsp Irish Moss @ 15 minutes			
Original Gravity						
Maximum		1.044	1.060		1.070	
Target	(80% extraction)	1.035	(80% extraction) 1.048		(80% extraction) 1.056	
Measured		1.035	1.048		1.047	
Primary Gravity		1.012	1.021		1.012	
Ending Gravity		1.011	1.019		1.009	
Extract Efficiency, %		80%	80%		67%	
Apparent Attenuation		69%	60%		81%	
BU/GU		0.38	1.00		0.26	
Potential Alcohol, %	wt% vol%	wt% vol%	wt% vol%		wt% vol%	
	2.52% 3.15%	3.05% 3.81%	3.99% 4.99%			
Lock Installed	3/31/00		5/17/00		5/31/00	
Secondary Fermenter	4/1/00		5/18/00		6/3/00	
Primary Fermenter Temp	65°		65°		65°	
Secondary Fermenter Temp	65°		65°		65°	
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/3	Corn Sugar 1/2			
Water, cups	2	2	2			
Number of Bottles	28		28		28	
Comments						
Brewing	Hops added at 20 minutes.		Hops added at 45 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation active at 16 hours.		Fermentation beginning at 16 hours.		Fermentation beginning at 16 hours. Blackberries, concentrate, and lambic yeast added to secondary. Lactic acid (4 oz) and oak chips (1/2 oz) added during transfer to tertiary fermenter (6/16) (1.009 gravity)	
Beer					Tied for third in Belgian and French at 2000 QUAFF Oktoberfest. First in Lambics at AFC2001, 2nd Runner-up to BOS.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Liz's Orange Blossom Mead		American Pale Ale (All Grain)		Weizen (All Grain)	
Brewing Date	5/28/00	8	6/17/00	9	7/4/00	10
Bottling Date	10/9/00		7/1/00		7/22/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	Orange Blossom Honey	12 lbs	American Two-Row Malt	6 lbs	Wheat Malt	5 lbs
	Yeast nutrients	2 tsp	Cara-Pils Malt	1 lb	German Pilsener Malt	2.5 lbs
	Citric acid	1 tsp	Crystal 60°L Malt	4 oz	Flaked Wheat	2 oz
			Flaked Barley	2 oz		
Color, SRM			6.9		3.2	
Color, MCU			6.9		3.2	
Actual Color, SRM						
First Rest			20 minutes		25 minutes	
Water, gallons			1.84 gallons		2.0 gallons	
Temperature			138°-136°		128°-124°	
Second Rest			70 minutes		65 minutes	
Water, gallons			1.0 gallon		1.75 gallons	
Temperature			150°-154° (152° average)		156°-146° (152° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature			170°		166°	
Sparge Water, gallons			3.2 gallons		2.5 gallons	
Boiling Time	15 minutes		60 minutes		65 minutes	
Boiling Hops			Cascade pellets (6.2%)	1 oz	Hallertauer pellets (2.6%)	1 oz
Finishing Hops			Cascade pellets (6.2%)	1 oz		
IBUs			38.9		13.3	
Yeast	Laivin Champagne Dry Yeast	2 packs	White Labs California Ale (WLP001) (22 oz starter)	1 vial	White Labs Hefeweizen (WLP300) (22 oz starter)	1 vial
Water/Treatment	all tap water		all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.128		1.070		1.070	
Target	1.128		(80% extraction) 1.058		(80% extraction) 1.058	
Measured	1.148		1.055		1.063	
Primary Gravity	1.039		1.013		1.014	
Ending Gravity	1.037		1.013		1.014	
Extract Efficiency, %	116%		79%		90%	
Apparent Attenuation	75%		76%		78%	
BU/GU	0.00		0.71		0.21	
Potential Alcohol, %	wt% vol%		wt% vol%		wt% vol%	
	11.66% 14.57%		4.41% 5.51%		5.14% 6.43%	
Lock Installed	5/28/00		6/21/00			
Secondary Fermenter	7/20/00		6/23/00		7/10/00	
Primary Fermenter Temp			65°		65°	
Secondary Fermenter Temp			65°		65°	
Priming Sugar, cups			Corn Sugar	1/2	Spelse	32 oz
Water, cups				2		2
Number of Bottles	27			28		30
Comments						
Brewing			Boiling hops added at 55 minutes. Finishing hops split between 15, 10, 5, and 2 minutes.		Hops added at first wort.	
Fermentation	Fermentation beginning after one day.		Fermentation beginning at 16 hours.		Fermentation active at 16 hours.	
Beer	Bottled as a still mead. Honorable mention in meads at AFC2001. Third in 2001 AHA NHC First Round in Traditional Mead. 2001 AHA Final Round Gold Medal. Third in Traditional				First in German Wheats at 2000 QUAFF Oktoberfest.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	California Common (All Grain)		Tripel (All Grain)		Russian Imperial Stout (All Grain)	
Brewing Date	7/15/00	11	8/13/00	12	9/3/00	13
Bottling Date	8/12/00		9/4/00		9/24/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt	5 lbs	German Pilsner Malt	10 lbs	American Two-Row Malt	9 lbs
	Cara-Pils Malt	1 lb	Flaked Wheat	4 oz	Crystal 40°L Malt	1 lb
	Crystal 40°L Malt	1 lb			Chocolate Malt	8 oz
	Flaked Barley	4 oz	White candi sugar	1 lb	Roasted Barley	8 oz
					Flaked Barley	4 oz
Color, SRM	12.1		4.3		32.9	
Color, MCU	13.5		4.3		105	
Actual Color, SRM						
First Rest	20 minutes		30 minutes		35 minutes	
Water, gallons	1.63 gallons		2.24 gallons		2.5 gallons	
Temperature	128°-125°		130°-128°		128°-124°	
Second Rest	70 minutes		60 minutes		55 minutes	
Water, gallons	1.37 gallons		2.00 gallons		2.25 gallons	
Temperature	150°-158° (154° average)		158°-158° (154° average)		152°-158° (154° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	167°		167°		166°	
Sparge Water, gallons	3.0 gallons		2.8 gallons		2.5 gallons	
Boiling Time	60 minutes		100 minutes		110 minutes	
Boiling Hops	Northern Brewer pellets (8.8%)	0.75 oz	Czech Saaz pellets (3.6%)	0.75 oz	Irish Northdown pellets (9.4%)	1 oz
			Hallertauer pellets (2.6%)	0.75 oz		
Finishing Hops	Northern Brewer pellets (8.8%)	0.25 oz	Czech Saaz pellets (3.6%)	0.25 oz	Kent Golding pellets (6.1%)	1 oz
			Hallertauer pellets (2.6%)	0.25 oz		
IBUs	41		21.3		60	
Yeast	White Labs California Lager (WLP810) (22 oz starter)	1 vial	White Labs Trappist Ale (WLP500) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial
Water/Treatment	all tap water 1 tsp Irish Moss @ 15 minutes		6 gallons DI, 1.05 gallons tap 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.070		1.112		1.108	
Target	(80% extraction) 1.056		(80% extraction) 1.091		(80% extraction) 1.086	
Measured	1.049		1.106		1.081	
Primary Gravity	1.016		1.024		1.029	
Ending Gravity	1.016		1.021		1.029	
Extract Efficiency, %	70%		95%		75%	
Apparent Attenuation	67%		80%		64%	
BU/GU	0.84		0.20		0.74	
Potential Alcohol, %	wt% 3.46%	vol% 4.33%	wt% 8.93%	vol% 11.16%	wt% 5.46%	vol% 6.83%
Lock Installed	7/19/00		8/17/00		9/7/00	
Secondary Fermenter	7/23/00		8/20/00		9/10/00	
Primary Fermenter Temp	65°		70°		70°	
Secondary Fermenter Temp	65°		70°		70°	
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/2	Corn Sugar	1/3
Water, cups	2		2		2	
Number of Bottles	29		29		29	
Comments						
Brewing	Boiling hops added at first wort. Finishing hops added at 5 minutes.		Boiling hops added at 60 minutes. Finishing hops added at 5 minutes.		Boiling hops added at 60 minutes. Finishing hops split between 15 minutes and 5 minutes.	
Fermentation	Fermentation active at 17 hours.		Fermentation active at 17 hours.		Fermentation active at 17 hours.	
Beer			Third in Belgians at 2001 QUAFF Oktoberfest.			
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Chocolate Robust Porter (All Grain)		Chocolate Cherry Vanilla Stout (All Grain)		Schwarzbier (All Grain)	
Brewing Date	10/7/00 14		10/22/00 15		11/18/00 16	
Bottling Date	10/29/00		11/12/00		12/17/00	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt	6 lbs	American Two-Row Malt	7 lbs	German Pilsener Malt	6 lbs
	Crystal 60°L Malt	1 lb	Crystal 60°L Malt	1 lb	Chocolate Malt	8 oz
	Chocolate Malt	1 lb	Chocolate Malt	1 lb	Black Malt	4 oz
	Flaked Wheat	3 oz	Roasted Barley	12 oz	Flaked Oats	2 oz
			Flaked Barley	4 oz		
Color, SRM	33.2		46.7		27.4	
Color, MCU	107		168		80.3	
Actual Color, SRM						
First Rest	20 minutes		15 minutes		20 minutes	
Water, gallons	2.0 gallons		2.25 gallons		1.5 gallons	
Temperature	129°-128°		129°-128°		139°-132°	
Second Rest	70 minutes		75 minutes		70 minutes	
Water, gallons	1.75 gallons		2.00 gallons		1.5 gallons	
Temperature	146°-154° (148° average)		154°-148° (152° average)		150°-162° (157° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	168°		168°		166°	
Sparge Water, gallons	2.8 gallons		2.65 gallons		2.85 gallons	
Boiling Time	90 minutes		120 minutes		70 minutes	
Boiling Hops	Cascade pellets (6.2%)	0.75 oz	Northern Brewer pellets (8.8%)	0.75 oz	Tettnanger pellets (4.9%)	1 oz
	Unsweetened chocolate	4 oz	Unsweetened chocolate	8 oz		
Finishing Hops	Cascade pellets (6.2%)	0.25 oz	Cinnamon	1 stick		
			Cherry Extract	4 oz		
			Vanilla Extract	1 oz		
IBUs	27		43.9		27	
Yeast	White Labs California Ale (WLP001) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial	White Labs German Lager (WLP830) (22 oz starter)	1 vial
Water/Treatment	all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.078		1.093		1.068	
Target	(80% extraction) 1.062		(80% extraction) 1.075		(80% extraction) 1.054	
Measured	1.059		1.069		1.054	
Primary Gravity	1.019		1.023		1.021	
Ending Gravity	1.019		1.022		1.020	
Extract Efficiency, %	76%		74%		79%	
Apparent Attenuation	68%		68%		63%	
BU/GU	0.46		0.64		0.50	
Potential Alcohol, %	wt%	vol%	wt%	vol%	wt%	vol%
	4.20%	5.25%	4.93%	6.17%	3.57%	4.46%
Lock Installed	10/13/00		10/26/00		11/22/00	
Secondary Fermenter	10/14/00		10/29/00		11/24/00	
Primary Fermenter Temp	65°		65°		60°	
Secondary Fermenter Temp	65°		65°		60°	
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/3	Corn Sugar	1/2
Water, cups	2		2		2	
Number of Bottles	28		28		29	
Comments						
Brewing	Chocolate added at first wort. Hops added at 60 and 2 minutes.		Chocolate added at first wort. Hops added at 70 minutes. Cinnamon added at 15 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation beginning at 16 hours.		Fermentation beginning at 16 hours. Vanilla and cherry extract added to secondary.		Fermentation active at 16 hours.	
Beer	Third is Porter at AFC2001. Second in Porters In 2001 Del Mar Fair.		Third in Specialty at AFC2001.		Third in National Dunkelmania Club-Only. Second In 2001 AHA NHC First Round in European Dark Lagers. 2001 AHA Final Round Gold Medal. Third in German Dark Lagers at 2001 Del Mar	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

19 beers in 2000  
212 beers total

BEER STYLE	Rauchbier (All Grain)		Cream Ale (All Grain)		Scotch Ale (Wee Heavy) (All Grain)	
Brewing Date	11/24/00 17		12/16/00 18		12/23/00 19	
Bottling Date	12/17/00		1/5/01		1/15/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	Rauch Malt	3.6 lbs	American Two-Row Malt	5 lbs	American Two-Row Malt	9 lbs
	Peated Malt	0.4 lbs	CaraPils	1 lb	Crystal 60°L Malt	1 lb
	Munich Malt	3 lbs	Flaked Maize	1 lb	Chocolate Malt	4 oz
	Flaked Oats	4 oz			Peated Barley	5 oz
					Flaked Barley	4 oz
Color, SRM	14.4		2.84		19.8	
Color, MCU	21.5		2.84		45.8	
Actual Color, SRM						
First Rest	15 minutes		15 minutes		20 minutes	
Water, gallons	1.75 gallons		1.75 gallons		2.5 gallons	
Temperature	120°		125°-124°		128°	
Second Rest	85 minutes		75 minutes		80 minutes	
Water, gallons	1.5 gallons		1.5 gallons		2.00 gallons	
Temperature	150°-155° (152° average)		146°-152° (148° average)		159°-152° (153° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	168°		168°		168°	
Sparge Water, gallons	2.85 gallons		2.65 gallons		2.65 gallons	
Boiling Time	60 minutes		90 minutes		90 minutes	
Boiling Hops	Tettnanger pellets (4.9%)	1 oz	Czech Saaz pellets (3.9%)	1 oz	Kent Golding pellets (6.1%)	1 oz
Finishing Hops						
IBUs	25.6		17		29.6	
Yeast	White Labs German Lager (WLP830) (22 oz starter)	1 vial	White Labs California Ale (WLP001) (22 oz starter)	1 vial	White Labs Irish Ale (WLP004) (22 oz starter)	1 vial
Water/Treatment	all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss	
Original Gravity						
Maximum	1.072		1.069		1.109	
Target	(80% extraction) 1.058		(80% extraction) 1.056		(80% extraction) 1.087	
Measured	1.057		1.052		1.075	
Primary Gravity	1.019		1.015		1.028	
Ending Gravity	1.016		1.014		1.028	
Extract Efficiency, %	79%		75%		69%	
Apparent Attenuation	72%		73%		63%	
BU/GU	0.45		0.33		0.39	
Potential Alcohol, %	wt% vol% 4.30% 5.38%		wt% vol% 3.98% 4.99%		wt% vol% 4.93% 6.17%	
Lock Installed	11/29/00		12/21/00		12/30/00	
Secondary Fermenter	12/3/00		12/23/00		12/31/00	
Primary Fermenter Temp	60°		65°		65°	
Secondary Fermenter Temp	60°		60°		60°	
Priming Sugar, cups	Corn Sugar	1/2	Corn Sugar	1/2	Corn Sugar	1/3
Water, cups	2		2		2	
Number of Bottles	29		28		29	
Comments						
Brewing	Hops added at 50 minutes.		Boiling hops added at 50 and 30 minutes. Finishing hops at 15 minutes		Hops added at 50 minutes.	
Fermentation	Fermentation beginning at 20 hours.		Fermentation just beginning at 16 hours.		Fermentation beginning at 16 hours.	
Beer	Third in Smoked Beers at AFC2001. Fourth in Smoked Beers at 2001 Del Mar Fair.				Second in English and Scottish Strong Ales at AFC2001.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Bohemian Pilsner (All Grain)		Scottish Export (All Grain)		Oatmeal Stout (All Grain)	
Brewing Date	1/1/01 1		1/6/01 2		1/14/01 3	
Bottling Date	1/27/01		2/4/01		2/9/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	Belgian Pilsener Malt 5 lbs		British Pale Malt 4 lbs		British Pale Malt 4 lbs	
	Munich Malt 1 lb		Crystal 60°L Malt 1 lb		Crystal 60°L Malt 1 lb	
	CaraPils Malt 1 lb		Chocolate Malt 4 oz		Chocolate Malt 8 oz	
	Flaked Oats 4 oz		Peated Barley 2 oz		Roasted Barley 8 oz	
			Flaked Barley 2 oz		Black Malt 4 oz	
					Flaked Oats 1 lb	
Color, SRM	5.1		17.2		40.1	
Color, MCU	5.1		33.9		138	
Actual Color, SRM						
First Rest	40 minutes		15 minutes		20 minutes	
Water, gallons	2.75 gallons		1.25 gallons		1.63 gallons	
Temperature	140°-134° (136° average)		124°		125°-124°	
Second Rest	60 minutes		75 minutes		70 minutes	
Water, gallons	~1.3 gallons decoction		1.25 gallons		1.62 gallons	
Temperature	148°-158° (152° average)		158°-152° (153° average)		158°-146° (154° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	170°		167°		168°	
Sparge Water, gallons	3.5 gallons		3.0 gallons		2.75 gallons	
Boiling Time	60 minutes		90 minutes		75 minutes	
Boiling Hops	Saaz pellets (3.9%) 1.5 oz		Kent Golding pellets (6.1%) 0.5 oz		Kent Golding pellets (6.1%) 1 oz	
Finishing Hops	Saaz pellets (3.9%) 0.5 oz					
IBUs	37		16.6		34.6	
Yeast	White Labs Czech Pilsner (WLP800) (22 oz starter) 1 vial		White Labs Edinburgh Ale (WLP028) (22 oz starter) 1 vial		White Labs Irish Ale (WLP004) (22 oz starter) 1 vial	
Water/Treatment	5 gallons DI, 1.25 gallons a tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.070		1.050		1.068	
Target	(80% extraction) 1.056		(80% extraction) 1.040		(80% extraction) 1.054	
Measured	1.050		1.048		1.057	
Primary Gravity	1.015		1.017		1.025	
Ending Gravity	1.014		1.016		1.025	
Extract Efficiency, %	71%		96%		84%	
Apparent Attenuation	72%		67%		58%	
BU/GU	0.74		0.35		0.61	
Potential Alcohol, %	wt% 3.78%	vol% 4.73%	wt% 3.36%	vol% 4.20%	wt% 3.36%	vol% 4.20%
Lock Installed	1/5/01		1/11/01		1/18/01	
Secondary Fermenter	1/9/01		1/14/01		1/21/01	
Primary Fermenter Temp	60°		65°		65°	
Secondary Fermenter Temp	50°-55°		60°		65°	
Priming Sugar, cups	Corn Sugar 1/2		Corn Sugar 1/3		Corn Sugar 1/3	
Water, cups	2		2		2	
Number of Bottles	29		27		29	
Comments						
Brewing	Double decoction. Boiling hops at 60 minutes. 1/4 oz at 15 and 1/4 oz at 5 minutes.		Hops added at 50 minutes.		Boiling hops added at 60 minutes. Finishing hops split between 15 minutes and 5 minutes.	
Fermentation	Fermentation beginning at 17 hours.		Fermentation beginning at 24 hours.		Fermentation active at 17 hours.	
Beer	Third in 2001 AHA NHC First Round in European Pale Lagers. Third in Classic Pilseners at 2001 Del Mar Fair.		Designed as a Heavy, but the high extraction resulted in an Export.		First in Oatmeal Stouts at 2001 Del Mar Fair.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	



BEER STYLE	Kölsch (All Grain)		Scottish Light Ale (All Grain)		Frambozen (All Grain)	
Brewing Date	1/28/01 4		3/10/01 5		3/24/01 6	
Bottling Date			3/31/01		5/11/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt 4 lbs		British Pale Malt 3.5 lbs		Belgian Pale Malt 3 lbs	
	CaraPils Malt 1 lb		Crystal 20°L Malt 8 oz		Flaked Wheat 2.5 lbs	
	Munich Malt 8 oz		Black Patent Malt 4 oz		Crystal 60°L Malt 8 oz	
	White Wheat Malt 8 oz		Peated Malt 1 oz		Flaked Oats 8 oz	
			Flaked Oats 2 oz		Raspberries 3 lbs	
					Cranberry-Raspberry Concentrate 12 oz	
Color, SRM	3.7		18.5		11.5	
Color, MCU	3.7		40		12.4	
Actual Color, SRM						
First Rest	15 minutes		20 minutes		15 minutes	
Water, gallons	1.5 gallons		1.12 gallons		1.63 gallons	
Temperature	122°-124° (122° average)		120°		130°-126°	
Second Rest	85 minutes		70 minutes		90 minutes	
Water, gallons	1.5 gallons		1.38 gallons		1.37 gallons	
Temperature	146°-155° (152° average)		160°-150° (155° average)		153°-148° (152° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	169°		168°		165°	
Sparge Water, gallons	2.75 gallons		3 gallons		2.75 gallons	
Boiling Time	60 minutes		60 minutes		60 minutes	
Boiling Hops	Tettnanger pellets (4.9%) 0.75 oz		Kent Golding pellets (6.1%) 0.33 oz		Styrian Golding pellets (6.1%) 0.5 oz (old, sun-baked pellets)	
Finishing Hops	Tettnanger pellets (4.9%) 0.25 oz		Kent Golding pellets (6.1%) 0.17 oz		Raspberry extract 4 oz Lactic acid (0.8%) 8 oz	
IBUs	21.5		12		12	
Yeast	White Labs Kölsch (WLP029) 1 vial (22 oz starter)		White Labs Edinburgh Ale (WLP028) 1 vial (22 oz starter)		White Labs California Ale (WLP001) (22 oz starter), Wyeast 1 pack Lambic Blend (#3278) (12 oz)	
Water/Treatment	all tap water 1 tsp Irish Moss		all tap water 1 tsp Irish Moss @ 15 minutes		5 gallons DI, 0.75 gallons tap water no Irish Moss	
Original Gravity						
Maximum	1.060		1.045		1.064	
Target	(80% extraction) 1.048		(80% extraction) 1.036		(80% extraction) 1.051	
Measured	1.045		1.037		1.054	
Primary Gravity	1.012		1.018		1.017	
Ending Gravity	1.012		1.016		1.012	
Extract Efficiency, %	75%		82%		84%	
Apparent Attenuation	73%		57%		78%	
BU/GU	0.48		0.32		0.22	
Potential Alcohol, %	wt% 3.46%	vol% 4.33%	wt% 2.20%	vol% 2.76%	wt% 4.41%	vol% 5.51%
Lock Installed	2/5/01				3/30/01	
Secondary Fermenter	2/9/01		3/18/01		4/5/01	
Primary Fermenter Temp	60°-65°		65°		65°	
Secondary Fermenter Temp	50°-55°		65°		65°	
Priming Sugar, cups	Corn Sugar 1/12		Corn Sugar 1/3		Corn Sugar 1/2	
Water, cups	0.33		2		2	
Number of Bottles	5		29		29	
Comments						
Brewing	Boiling hops added at 50 minutes, finishing hops at 5 minutes.		Boiling hops added at 50 minutes. Finishing hops added at 2 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation beginning only at 72 hours. Second yeast vial added.		Fermentation active at 16 hours.		Fermentation starting at 20 hours. Tertiary fermenter on April 25 (1.014), with 4 oz of 0.8% lactic acid and 1/2 oz French oak chips. Raspberry extract and 4 oz of 0.8% lactic acid added at bottling.	
Beer	Heavy phenolics. Beer thrown out. 5 bottles for bad beer example		Third in 2001 AHA NHC First Round in Scottish Ales. Third in Scottish Ales at 2001 Del Mar Fair.		First in Belgians and Best of Show at 2001 QUAFF Oktoberfest Picnic. Third at 2002 San Diego County Fair.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	



BEER STYLE	Belgian Wit (All Grain)		Los Angeles Extra Special Bitter (All Grain)		Hefeweizen (All Grain)	
Brewing Date	5/12/01 7		5/20/01 8		5/28/01 9	
Bottling Date	6/3/01		6/9/01		6/20/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	Raw Wheat 5 lbs		British Pale Malt 5 lbs		German Wheat Malt 5 lbs	
	American Two-Row Malt 2 lbs		Crystal 60°L Malt 8 oz		German Pilsener Malt 2 lbs	
					Flaked Oats 4 oz	
Color, SRM	3.2		11.1		3.1	
Color, MCU	3.2		11.8		3.1	
Actual Color, SRM						
First Rest	15 minutes		15 minutes		15 minutes	
Water, gallons	1.5 gallons		1.50 gallons		1.63 gallons	
Temperature	119°		120°-125°		122°	
Second Rest	75 minutes		45 minutes		75 minutes	
Water, gallons	1.5 gallons		1.50 gallons		1.75 gallons	
Temperature	150-156° (154° average)		146°-152° (150° average)		150-156° (154° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	168°		164°		166°	
Sparge Water, gallons	3 gallons		2.78 gallons		2.75 gallons	
Boiling Time	60 minutes		90 minutes		70 minutes	
Boiling Hops	Hallertauer pellets (4.5%) 0.75 oz		Kent Golding pellets (6.4%) 0.5 oz Fuggles pellets (5.1%) 0.5 oz		Teutinger pellets (4.9%) 0.6 oz	
Finishing Hops			Kent Golding pellets (6.4%) 0.5 oz Fuggles pellets (5.1%) 0.5 oz			
IBUs	18		46		15	
Yeast	White Labs Belgian Wit (WLP400) (22 oz starter) 1 vial		White Labs Premium Bitter (WLP026) (22 oz starter) 1 vial		White Labs Hefeweizen (WLP300) (22 oz starter) 1 vial	
Water/Treatment	all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.071		1.054		1.070	
Target	(80% extraction) 1.057		(80% extraction) 1.044		(80% extraction) 1.056	
Measured	1.047		1.052		1.053	
Primary Gravity	1.015		1.025		1.016	
Ending Gravity	1.014		1.015		1.016	
Extract Efficiency, %	66%		96%		78%	
Apparent Attenuation	70%		71%		70%	
BU/GU	0.38		0.88		0.28	
Potential Alcohol, %	wt% 3.46%	vol% 4.33%	wt% 3.89%	vol% 4.86%	wt% 3.88%	vol% 4.86%
Lock Installed			5/24/01			
Secondary Fermenter	5/19/01		5/27/01		6/2/01	
Primary Fermenter Temp	67°		68°		70°	
Secondary Fermenter Temp	67°		68°		70°	
Priming Sugar, cups	Corn Sugar 1/2				Speise 32 oz	
Water, cups	2					
Number of Bottles	27		kagged		29	
Comments						
Brewing	Hops added at 50 minutes.		Boiling hops added at 50 minutes. Finishing hops split between 15 minutes at 2 minutes.		Hops added at 50 minutes.	
Fermentation	Fermentation beginning at 24 hours.		Fermentation active at 12 hours.		Fermentation active at 12 hours.	
Beer	QUAFF representative for Wit Club-Only. Second In Belgians at 2001 QUAFF Oktoberfest.		Designed as a Best Bitter, but ended up as an ESB. Taste is somewhat cidery.		Beer may have been contaminated. Two bottles exploded.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	California Common (All Grain)		Best Bitter (All Grain)		Olde Nipplehead II (All Grain)	
Brewing Date	7/8/01	10	8/4/01	11	8/11/01	12
Bottling Date	7/29/01		8/26/01		9/9/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt 5.5 lbs Cara-Pils Malt 1 lb Crystal 40°L Malt 1 lb Flaked Oats 2 oz		British Pale Malt 5 lbs Crystal 30°-37°L Malt 11 oz Flaked Oats 2 oz		American Two-Row Malt 12 lbs Crystal 20°L Malt 1 lb Crystal 60°L Malt 1 lb Brown Sugar 1 lb	
Color, SRM	11.5		10.2		15.7	
Color, MCU	12.5		10.3		27.2	
Actual Color, SRM						
First Rest	15 minutes		15 minutes		15 minutes	
Water, gallons	1.75 gallons		1.31 gallons		1.5 gallons per mash	
Temperature	122°-123°		124°		122° first mash, 134° second mash	
Second Rest	75 minutes		60 minutes		75 minutes	
Water, gallons	1.75 gallons		1.38 gallons		1.25 gallons per mash	
Temperature	157°-146° (152° average)		156°-149° (152° average)		156°-148° (152° average)	
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature	167°		167°		168°	
Sparge Water, gallons	2.88 gallons		2.55 gallons		2.74 gallons in first mash, 2.66 in second	
Boiling Time	75 minutes		60 minutes		180 minutes	
Boiling Hops	Northern Brewer pellets (8.8%) 0.75 oz		Kent Golding pellets (6.4%) 1 oz		Centennial pellets (9.9%) 2 oz	
Finishing Hops	Northern Brewer pellets (8.8%) 1.25 oz		Kent Golding pellets (6.4%) 0.5 oz		Cascade pellets (6.0%) 1 oz	
IBUs	45		40		89	
Yeast	White Labs San Francisco Lager (WLP810) (22 oz starter) 1 vial		White Labs English Ale (WLP002) (25 oz starter) 1 vial		White Labs California Ale (WLP001) (12 & 25 oz starters) 1 vial	
Water/Treatment	all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum	1.068		1.058		1.153	
Target	(80% extraction) 1.054		(80% extraction) 1.046		(80% extraction) 1.125	
Measured	1.052		1.043		1.107	
Primary Gravity	1.017		1.015		1.038	
Ending Gravity	1.016		1.014		1.025	
Extract Efficiency, %	78%		74%		70%	
Apparent Attenuation	69%		67%		77%	
BU/GU	0.87		0.93		0.83	
Potential Alcohol, %	wt% 3.78% vol% 4.73%		wt% 3.04% vol% 3.81%		wt% 8.61% vol% 10.76%	
Lock Installed	7/12/01		8/7/01		8/15/01	
Secondary Fermenter	7/15/01		8/12/01		8/19/01	
Primary Fermenter Temp	65°		68°		68°	
Secondary Fermenter Temp	65°		68°		68°	
Priming Sugar, cups	Corn Sugar 1/2		Corn Sugar 1/3		Corn Sugar 1/3	
Water, cups	2		2		2	
Number of Bottles	28		28		28	
Comments						
Brewing	Hops added in 1/4 ounce increments at 60, 50, 30, 15, 10, 5, 2 minutes, and at end of boil.		Boiling hops added at 50 minutes. Finishing hops split between 15 minutes at 2 minutes. First attempt for separation of cold break.		Double mash, with sparge from first mash used for protein rest and starch conversion of second mash. Hops added at 60, 15, and 2 minutes.	
Fermentation	Fermentation active at 16 hours.		Fermentation active at 12 hours.		Fermentation very active at 15 hours.	
Beer	QUAFF Representative for Club-Only. Third place in Mixed Styles in 2001 California State Homebrew Competition.				First in barley wines at 2001 California State Homebrew Competition. Second in 2002 AHA NHC First Round. Third at 2002 San Diego County Fair.	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Seven-Grain Imperial Stout (All Grain)		Katie's Brown Ale (Extract)		Berliner Weisse (All Grain)	
Brewing Date	8/18/01	13	9/1/01	14	9/2/01	15
Bottling Date	9/16/01		9/16/01		9/22/01	
Primary Fermenter	3.0 gallons		3.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.8 gallons		2.8 gallons	
Malt	American Two-Row Malt 12 lbs Crystal 40°L Malt 1 lb Crystal 60°L Malt 1 lb Crystal 80°L Malt 1 lb Chocolate Malt 8 oz Roasted Barley 8 oz Flaked Barley 4 oz Brown Sugar 1 lb		Amber Malt Extract 4 lbs		German Pilsener Malt 2 lbs German Wheat Malt 1.5 lbs	
Color, SRM	40.6				3.1	
Color, MCU	140				3.1	
Actual Color, SRM						
First Rest	15 minutes				12 hours	
Water, gallons	1.25 gallons per mash				0.75 gallons with 0.75 pounds of grain	
Temperature	122° first mash, 130°-134° second mash				95°-85°	
Second Rest	75 minutes				20 minutes	
Water, gallons	1.25 gallons per mash				1.0 gallons	
Temperature	156°-148° (152° average)				118-122° (120° average)	
Third Rest					60 minutes	
Water, gallons					1.25 gallons	
Temperature					154-156° (155° average)	
Mashout Temperature	168°				169°	
Sparge Water, gallons	2.5 gallons in first mash, 2.12 in second				1.87 gallons	
Boiling Time	180 minutes		60 minutes		30 minutes	
Boiling Hops	Irish Northdown pellets (9.4%) 1 oz Kent Golding pellets (6.1%) 1 oz		Cascade pellets (5.8%) 0.75 oz		Hallertauer pellets (5.8%) 0.25 oz	
Finishing Hops	Kent Golding pellets (6.1%) 1 oz		Cascade pellets (5.8%) 0.25 oz			
IBUs	87		30		5.4	
Yeast	White Labs Irish Ale (WLP004) 1 vial (12 & 22 oz starters)		White Labs California Ale (WLP001) 1 vial		White Labs German Ale/Kolsch (WLP029) (22 oz starter)	
Water/Treatment	all tap water 1 tsp Irish Moss @ 15 minutes		all tap water 1 tsp Irish Moss @ 15 minutes		4 gallons DI, 0.33 gallons tap 1 tsp Irish Moss @ 10 minutes	
Original Gravity						
Maximum	1.133		1.048		1.040	
Target	(80% extraction) 1.109		1.048		(80% extraction) 1.032	
Measured	1.092		1.048		1.030	
Primary Gravity	1.034		1.014		1.008	
Ending Gravity	1.032		1.012		1.008	
Extract Efficiency, %	69%		100%		75%	
Apparent Attenuation	65%		75%		73%	
BU/GU	0.95		0.62		0.18	
Potential Alcohol, %	wt% 6.30% vol% 7.88%		wt% 3.78% vol% 4.73%		wt% 2.31% vol% 2.89%	
Lock Installed	8/22/01		9/7/01		9/6/01	
Secondary Fermenter	8/25/01		9/9/01		9/9/01	
Primary Fermenter Temp	68°		68°		68°	
Secondary Fermenter Temp	68°		68°		68°	
Priming Sugar, cups	Corn Sugar 1/3		Corn Sugar 1/2		Corn Sugar 1/2	
Water, cups	2		2		2	
Number of Bottles	29		29		27	
Comments						
Brewing	Double mash, with sparge from first mash used for protein rest and starch conversion of second mash. Hops added at 60, 15, and 2 minutes.		Extract brew - Katie's first		Hops added at 30 minutes.	
Fermentation	Very active fermentation at 15 hours.		Fermentation beginning at 20 hours.		Fermentation active at 20 hours.	
Beer					Third place in wheat beers at 2001 California State Homebrew Competition	
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Liz's Vanilla Mead (Split Mead Batch)		Liz's Raspberry Mead (Split Mead Batch)		Dusseldorf Alt (All Grain)	
Brewing Date	9/3/01	16	9/3/01	17	9/15/01	18
Bottling Date	12/9/01		2/3/02		10/7/01	
Primary Fermenter	5.0 gallons		5.0 gallons		3.0 gallons	
Secondary Fermenter	2.8 gallons		2.2 gallons		2.8 gallons	
Malt	Orange Blossom Honey 13 lbs Mountain Wildflower Honey 3 lbs  Yeast Nutrients 3 tps Citric Acid 2 tps		Orange Blossom Honey 13 lbs Mountain Wildflower Honey 3 lbs  Yeast Nutrients 3 tps Citric Acid 2 tps  Raspberries (frozen) 3 lbs Raspberry extract 4 oz		German Pilsener Malt 3 lbs Munich Malt 3 lbs Chocolate Malt 2 oz Flaked Barley 2 oz	
Color, SRM						14.3
Color, MCU						21
Actual Color, SRM						
First Rest						15 minutes
Water, gallons						1.38
Temperature						120°
Second Rest						75 minutes
Water, gallons						1.5 gallons
Temperature						154°-142° (148° average)
Third Rest						
Water, gallons						
Temperature						
Mashout Temperature						169°
Sparge Water, gallons						2.5 gallons
Boiling Time	15 minutes		15 minutes			60 minutes
Boiling Hops					German Select pellets (4.4%)	2 oz
Finishing Hops	Vanilla beans 2 beans				German Select pellets (4.4%)	1 oz
IBUs						56
Yeast	Dry Champagne Yeast 2 packs		Dry Champagne Yeast 2 packs		White Labs German Ale/Kolsch (WLP029) (22 oz starter)	1 vial
Water/Treatment	5 gallons DI 1 tsp Irish Moss @ 10 minutes		5 gallons DI 1 tsp Irish Moss @ 10 minutes		all tap water 1 tsp Irish Moss @ 15 minutes	
Original Gravity						
Maximum		1.130		1.130		1.062
Target		1.130		1.130	(80% extraction)	1.050
Measured		1.130		1.130		1.048
Primary Gravity		1.017		1.017		1.018
Ending Gravity		1.016		1.001		1.015
Extract Efficiency, %		100%		100%		77%
Apparent Attenuation		88%		99%		69%
BU/GU		0.00		0.00		1.17
Potential Alcohol, %		wt% 11.97% vol% 14.96%		wt% 13.55% vol% 16.93%		wt% 3.47% vol% 4.33%
Lock Installed		9/3/01		9/3/01		-
Secondary Fermenter		10/20/01		10/20/01		9/22/01
Primary Fermenter Temp		68°		68°		68°
Secondary Fermenter Temp		68°		68°-60°		68°
Priming Sugar, cups					Corn Sugar	1/2
Water, cups						2
Number of Bottles		27		22		28
Comments						
Brewing					Boiling hops added at 50 minutes. Finishing hops split between 15 minutes and 2 minutes.	
Fermentation		Fermentation active at 18 hours.		Fermentation active at 18 hours.	Fermentation active at 20 hours.	
Beer		Fifth in Herb and Spice Mead at 2002 San Diego County Fair.		Fourth in Fruit and Vegetable Mead at 2002 San Diego County Fair.		
Source of Recipe		Custom recipe.		Custom recipe.	Custom recipe.	