Browling Date	BEER STYLE	English Mild	Belgian Table Beer	Chocolate Old Ale
Bottling Date 107/91		(All Grain)	(All Grain)	(All Grain)
Pitriesty Fernmetter				
Secondary Fermenter			and the same of th	
American Two-Flow Malt 3 lbs Crystat 60°L Mart 1 lbs Belgian Pissener Malt 2.75 lbs American Two-Flow Malt 2 lbs Crystat 60°L Mart 1 lbs Belgian Special B 4 cz Flaked Bartey 3 cz September 4 cz Crystat 60°L Mart 2 lbs Flaked Wheet 4 cz Crystat 60°L Mart 2 lbs Flaked Wheet 4 cz Crystat 60°L Mart 2 lbs Flaked Wheet 4 cz Crystat 60°L Mart 2 lbs Flaked Wheet 4 cz Crystat 60°L Mart 2 lbs Flaked Wheet 4 cz Crystat 60°L Mart 2 lbs 1 lb				
Crystal 60°L Melt	Secondary Fermenter			
Color, SPM	Malt	American Two-Row Malt 3 lbs	Belgian Pilsener Malt 2.75 lbs	American Two-Row Malt 8 lbs
Cactor, SPM		Crystal 60°L Malt 1 lb	Belgian Special B 4 oz	Crystal 60°L Malt 2 lb
Cactor, SPM		Chocolate Malt 4 oz	2	Flaked Wheat 4 oz
Color, SRM				
Color, SRM 419 10.2 Color, SRM 419 10.2 37.7 Color, SRM 419 10.2 37.7 Color, SRM 419 10.2 37.7 Color, SRM 419 410.2 37.7 Color, SRM 419 410.2		riched Bulley		
Color, MCU				Chishodonisa di lossicio
Color, MCU				
Actual Color, SRM		19		18
First Rest 15 minutes 10 minutes 20 minutes 1.1 gallons 1.1 gallons 1.2 gallons 1.2 gallons 1.2 gallons 1.30 gallons 1.		41.8	10.2	37.5
Water, gallons 1.13 gallons 1.15 gallons 1.29 1.20 1.25 1.				
Temperature	First Rest	15 minutes	10 minutes	20 minutes
Temperature	Water, gallons	1.13 gallons	1.1 gallons	2.3 gallons
Water, gallons 1.37 gallons 1.22 gallons 1.22 gallons 1.22 gallons 1.25 (150° average) 1.46°-152° (150° average) 1.55°-145° (151° average) 1.55° (151	Temperature		130°-122°	125°
Water, gallons 1.37 gallons 1.22 gallons 1.22 gallons 1.22 gallons 1.25 (150° average) 1.46°-152° (150° average) 1.55°-145° (151° average) 1.55° (151	Second Rest	60 minutes	50 minutes	70 minutes
Temperature 158"-152" (154" average) 146"-152" (150" average) 155"-145" (151" average 156"-145" (151" average 156"		1.37 gallons	0.9 gallons	
Third Rest Water, gallons Temperature Water, gallons Deling Time 2, 2,5 gallons Bolling Time 60 minutes 60 min				
Water/Treatment 168* 158*		Total (for brotage)	1-10 TOE (100 dvelage)	155 140 (151 divilage)
Temperature				
Mashout Temperature		l		
Sparge Water, gallons 2.5 gallons 2.75 gallons 3.8 gallons 3.8 gallons 3.8 gallons 3.9				
Bolling Hops				
Fuggles pellets (5.1%) 0.5 oz Saaz pellets (3.9%) 0.5 oz Fuggles pellets (5.1%) 1 oz	Sparge Water, gallons			
Saaz pellets (3.9%) 0.5 oz			60 minutes	110 minutes
Femoritation Femoritation active at 16 hours. Fermentation active at 16 hours. Midel (WLPOQE) (Soz starter) White Labs Saison (WLP565) 1 vial (WLPOQ4) (22 oz starter) vial (WLPOQ4) (20 oz start	Boiling Hops	Fuggles pellets (5.1%) 0.5 oz	Saaz pellets (3.9%) 0.5 oz	Fuggles pellets (5.1%) 1 oz
Femoritation Femoritation active at 16 hours. Fermentation active at 16 hours. Midel (WLPOQE) (Soz starter) White Labs Saison (WLP565) 1 vial (WLPOQ4) (22 oz starter) vial (WLPOQ4) (20 oz start				
Femoritation Femoritation active at 16 hours. Fermentation active at 16 hours. Midel (WLPOQE) (Soz starter) White Labs Saison (WLP565) 1 vial (WLPOQ4) (22 oz starter) vial (WLPOQ4) (20 oz start				
February Femoment Femomentation active at 16 hours. Fermentation active at 16 hours. Middle Vision Vis	Finishing Hops		Saaz peliets (3.9%) 0.5 oz	
White Labs English Ale (WLP002) (25 oz starter)			· ` ` '	
White Labs English Ale (WLP002) (25 oz starter)				
White Labs English Ale (WLP002) (25 oz starter)				
White Labs English Ale (WLP002) (25 oz starter)	IRI is	4E	- 11	30
Water/Treatment				The state of the s
Water/Treatment ali tap water 1 tap Irish Moss @ 15 minutes 1 tap Irish Moss @ 15 minu	Yeast			Commence of the Commence of th
1 tsp Irish Moss @ 15 minutes		(WLP002) (25 oz starter)	(22 oz starter)	(WLP004) (22 oz starter)
1 tsp Irish Moss @ 15 minutes				
Original Gravity Maximum 1.045 1.031 1.11 Target (80% extraction) 1.036 (80% extraction) 1.025 (80% extraction) 1.09 Measured 1.038 1.038 1.028 1.028 1.028 Primary Gravity 1.014 1.007 1.02 1.02 Ending Gravity 1.014 1.007 1.02 1.02 Edrical Efficiency, % 84% 90% 72° 1.02 Apparent Attenuation 63% 75% 73° 73° 73° 1.02	Water/Treatment		4 gallons DI, 0.75 gallons tap	all tap water
Measured		1 tsp Irish Moss @ 15 minutes	1 tsp Irish Moss @ 15 minutes	1 tsp Irish Moss @ 15 minutes
Target	Original Gravity			
Target (80% extraction) 1.038 (80% extraction) 1.025 (80% extraction) 1.026 (1.026 1.026 1.026 1.026 1.026 1.026 1.026 1.026 1.027 1.02	Maximum	1.045	1.031	1.118
Measured 1.038	Target			•
Primary Gravity 1.015 1.008 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02		, ,		
Ending Gravity Extract Efficiency, % Apparent Attenuetion B3% BU/GU BU/G				
Extract Efficiency, % 84% 90% 72%				
Apparent Attenuation 63% 75% 73% 73%				
BU/GU				
Potential Alcohol, %				
Potential Alcohol, % 2.52% 3.15% 2.21% 2.76% 6.51% 8.14% Lock Installed 9/28/01 - 11/15/01 Secondary Fermenter 9/30/01 10/14/01 11/18/01 Primary Fermenter Temp 68° 68° 68° Secondary Fermenter Temp 68° 68° 68° 68° Secondary Fermenter Temp 68° 68° 68° 68° 68° 68° 68° 68° 68° 68°	BU/GU			
Lock Instelled 9/28/01 Secondary Fermenter 9/30/01 10/14/01 11/18/01 1				
Secondary Fermenter 9/30/01 10/14/01 11/18/01 Primary Fermenter Temp 68° 68° 68° 68° 68° 68° 68° 68° 68° 68°		2.52% 3.15%	2.21% 2.76%	6.51% 8.14%
Secondary Fermenter Primary Fermenter Temp Secondary Secondar	Lock installed	9/28/01		11/15/01
Primary Fermenter Temp	Secondary Fermenter	9/30/01	10/14/01	
Secondary Fermenter Tem; 68° 68° 68° 68° 68° 68° 68° 68° 68° 68°	Primary Fermenter Temp	68°		
Priming Sugar, cups Com Sugar 1/3 Com Sugar 2/3 2 2 2 2 2 2 2 2 2		69°		
Water, cups 2	Priming Sugar cups			
Number of Botties Brewing Hops added at 50 minutes. Boiling hops added at 50 minutes. Finishing hops split between 10 minutes and 2 minutes. Fermentation Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Formentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation act				
Brewing Hops added at 50 minutes. Boiling hops added at 50 minutes. Finishing hops split between 10 minutes and 2 minutes. Fermentation Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours.				
Brewing Hops added at 50 minutes. Boiling hops added at 50 minutes. FinIshing hops split between 10 minutes and 2 minutes. Fermentation Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 10 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Ferm	Wetter the same of	30	48	30
Finishing hops split between 10 minutes and 2 minutes. Fermentation Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours.				
Beer Beer Beer diluted with 2 gellons DI to 1.016 OG equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, 1.6% ABV Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Formentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours.	Brewing	Hops added at 50 minutes.		
Fermentation Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 16 hours. Fermentation active at 16 hours. Fermentation active at 20 hours. Fermentation active at 20 hours. Fermentation active at 16 hours.				wort.
Beer diluted with 2 gallons DI to 1.016 OG equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers at 2002 an Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.			and 2 minutes.	
Beer diluted with 2 gallons DI to 1.016 OG equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers at 2002 an Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.				
Beer diluted with 2 gallons DI to 1.016 OG equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers at 2002 an Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.	Fermentation	Fermentation active at 16 hours	Fermentation active at 20 hours	Fermentation active at 16 hours
equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers a 2002 San Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.			. Street Louis and the Hould.	Similarity Court of 10 110015.
equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers a 2002 San Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.				L)
equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers a 2002 San Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.				
equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers a 2002 San Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.				I)
equivalent, 8 IBUs, 1.004 FG, 1.3% ABW, AFCHBC. Fifth in Specialty Beers a 2002 San Diego County Fair. Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.				
Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.	Beer			
Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.			equivalent, 8 IBUs, 1.004 FG, 1.3% ABW,	AFCHBC. Fifth in Specialty Beers at
Source of Recipe Custom recipe. Modified - Belgian Ales by Pierre Rajotte. Custom recipe.			1.6% ABV	2002 San Diego County Fair.
	Source of Recipe	Custom recipe.	Modified - Belgian Ales by Pierre Raiotte	Custom recipe.
	The state of the s		A TOTAL TRANSPORT	Page 66

23 beers in 2001 235 bears total

Brewing Date Bottling Date Primary Fermenter Secondary Fermenter Mait Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature Third Rest	2.8 Hugh Baird Pale Maît* Crystal 60°L Maît Chocolate Maît Peated Maît 10 1 1.5	gallons gallons 5 lbs 8 oz 4 oz 2 oz	2.8 Hugh Baird Pale Malt Crystal 60°L Malt Chocolate Malt Peated Malt	gallons gallons 5 lbs 8 oz 4 oz 2 oz		gallons gallons 6 lbs 4 oz
Bottling Date Primary Fermenter Secondary Fermenter Mait Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	12/23/01 3.0 2.8 Hugh Baird Pale Mait* Crystal 60°L Malt Chocolate Malt Peated Malt 10 1 1.5	gallons gallons 5 lbs 8 oz 4 oz 2 oz 17.6 35.9 minutes gallons	1/6/02 3.0 2.8 Hugh Baird Pale Malt Crystal 60°L Malt Chocolate Malt Peated Malt	gallons gallons 5 lbs 8 oz 4 oz 2 oz	1/27/02 3.0 2.8 German Pilsener Malt	gallons 6 lbs 4 oz
Primary Fermenter Secondary Fermenter Mait Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	3.0 2.8 Hugh Baird Pale Mait* Crystal 60°L Malt Chocolate Malt Peated Malt 10 1 1.5	gallons 5 lbs 8 oz 4 oz 2 oz 17.6 35.9 minutes gallons	3.0 2.8 Hugh Baird Pale Malt Crystal 60°L Malt Chocolate Malt Peated Malt	gallons 5 lbs 8 oz 4 oz 2 oz	3.0 2.8 German Pilsener Malt	gallons 6 lbs 4 oz
Secondary Fermenter Mait Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	2.8 Hugh Baird Pale Maît* Crystal 60°L Maît Chocolate Maît Peated Maît 10 1 1.5	gallons 5 lbs 8 oz 4 oz 2 oz 17.6 35.9 minutes gallons	2.8 Hugh Baird Pale Malt Crystal 60°L Malt Chocolate Malt Peated Malt	gallons 5 lbs 8 oz 4 oz 2 oz	2.8 German Pilsener Malt	gallons 6 lbs 4 oz
Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	Hugh Baird Pale Mait* Crystal 60°L Mait Chocolate Mait Peated Mait 100 1.5	5 lbs 8 oz 4 oz 2 oz 17.6 35.9 minutes gallons	Hugh Baird Pale Matt Crystal 60°L Malt Chocolate Malt Peated Malt	5 lbs 8 oz 4 oz 2 oz	German Pilsener Malt	6 lbs 4 oz
Color, SRM Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	Crystal 60°L Mait Chocolate Mait Peated Mait	8 oz 4 oz 2 oz 17.6 35.9 minutes gallons	Crystal 60°L Mait Chocolate Mait Peated Mait	8 oz 4 oz 2 oz		4 oz
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	Chocolate Malt Peated Malt 10 1 1.5	4 oz 2 oz 17.6 35.9 minutes gallons	Chocolate Malt Peated Malt	4 oz 2 oz	Flaked Barley	2,0
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	Peated Malt 10 1 1.5 90 1 1.5	17.6 35.9 minutes gallons	Peated Malt	2 oz		
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	10 i 1.5 90 i 1.5	17.6 35.9 minutes gallons		17.6		
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	35.9 minutes gallons	46			
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	35.9 minutes gallons	46			
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	35.9 minutes gallons	46			
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	35.9 minutes gallons	46			
Color, MCU Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	35.9 minutes gallons	18			
Actual Color, SRM First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	ninutes gallons	16.	35.9		
First Rest Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	gallons	15.			2.8
Water, gallons Temperature Second Rest Water, gallons Temperature	1.5 90 i 1.5	gallons	15			
Temperature Second Rest Water, gallons Temperature	90 i 1.5			minutes		minutes
Second Rest Water, gallons Temperature	1.5		1.5	gallons	1.5	5 gallons
Water, gallons Temperature	1.5	122°		122°		128
Temperature		minutes		minutes		minutes
	158°-155° (156° a	gallons	The second secon	gallons		5 gallons
Third Rest		verage)	156°-150° (154° a	verage)	156°-152° (152° i	average
Water, gellons						
Temperature						
Mashout Temperature		168°		168"	eticus examination and a second	170
Sparge Water, gallons		gallons		gallons		5 gallon
Boiling Time		minutes		minutes		minute
Boiling Hops	Kent Golding pellets (6.1%)	0.5 oz	Kent Golding pellets (6.1%)	0.5 oz	Hallertauer pellets (4.4%)	0.5 oz
			l			
Finishing Hops					Hallertauer pellets (4.4%)	0.5 oz
IBUs		19		19		19
Yeast	White Labs Edinburgh Ale	1 vial	White Labs Edinburgh Ale	1 vial	White Labs German Lager	1 vial
1	(WLP028) (22 oz starter)		(WLP028) (22 oz starter)		(WLP830) (22 oz starter)	
					(
Water/Treatment	all tap water		all tap water		all tap water	
	1 tsp Irish Moss @ 15 minutes		1 tsp Irish Moss @ 15 minutes	1	1 tsp Irish Moss	
Original Gravity	10-30-00					
Maximum		1.062		1.062		1.066
Target	(80% extraction)	1.049	(80% extraction)	1.049	(80% extraction)	1.053
Measured		1.044		1.050	` ` ´	1.05
Primary Gravity		1.027		1.018		1.017
Ending Gravity		1.026		1.017		1.010
Extract Efficiency, %		71%		81%		86%
Apparent Attenuation		41%		66%		729
BU/GU		0.43		0.38		0.3
	wt%	vol%	wt%	vol%	wt%	
Potential Alcohol, %	1.89%		3.47%		4.30%	
Lock Installed			12/28/01		1/5/02	
Secondary Fermenter	12/9/01		12/30/01		1/12/02	
Primary Fermenter Temp		65°		65°		56°-60
Secondary Fermenter Temp		65°		62"		54°-58
	Corn Sugar	1/3	Corn Sugar	1/3	Corn Sugar	1/2
Water, cups	es contrologia de	2		2	an we बेर्ड वा कर क ा प्रदेश हैं।	2
Number of Bottles		29		29		29
Comments		111				
Brewing	Hops added at 60 minutes. Vi	ery low	Hops added at first work	t.	1/2 oz hops at 50 minutes, 1	/4 oz at
	apparent conversion (based or		The state of the state of	**	30 minutes, 1/8 oz at 15 minu	
	test).				oz at 2 minutes	1100, 170
					OZ GI Z Hallaides	
Fermentation	Fermentation active at 16 ho	ours	Fermentation active at 16 h	OUTE	Fermentation beginning at 14	houre
Contentation	i cincilation active at 10 It	Julia,	rementation active at 10 II	ours.	rementation beginning at 14	i nours.
			l		l .	
1						
Beer	* - Largely improveded Del	a mosti		_	Third in Fance - D. L. I	-1 000
Deel	* - Largely unconverted. Pale				Third in European Pale Lagers	at 2003
	was probably really crystal r	TENT.			AFCHBC.	
Payment of Desire	A					
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Belgian Tripel	Cranberry Wheat	Traditional Mead
Brewing Date	(Ali Grain) 1/21/02 2	(All Grain) 2/17/02 3	(Split Mead Batch)
Bottling Date	1/21/02 2 3/3/02	2/17/02 3 3/16/02	3/10/02 4 6/16/02
Primary Fermenter	The second secon		
Secondary Fermenter	3.0 gallons	3.0 gallons	5.0 gallons
Malt	Belgian Pilsener Malt 10 lbs Table Sugar 1 lb	2.8 gallons American Two-Row Malt 2 lbs Red Wheat Malt 4 lbs Flaked Oats 4 oz Cranberries 4 lbs Cranberry Cocktail Concentrate 1 lb	2.8 gallons Orange Blossom Honey 15 lbs Yeast Nutrients 3 tsps Citric Acid 2 tsps
Color, SRM Color, MCU Actual Color, SRM	4.9 4.9	3	
First Rest	12 minutes	20 minutes	
Water, gallons	2.25 gallons		
Temperature	128°-124°	125°-122°	
Second Rest	90 minutes		
Water, gallons	2.0 gallons		
Temperature	156°-152° (152° average)	152°-148° (150° average)	
Third Rest	(in the diologo)	The Troe Melage)	
Water, gallons	l .		
Temperature	1		I I
Mashout Temperature	170°	166°	
Sparge Water, gallons	1.8 gallons		
Boiling Time	60 minutes		20 minutes
Boiling Hops	Styrian Golding pellets (4.0% 0.75 oz		20 minutes
John griopo	Saaz pellets (4.5%) 0.5 oz	0.5 02	
Finishing Hops	Saaz pellets (4.5%) 0.5 oz Styrian Golding pellets (4.0% 0.25 oz		
IBUs	28.7	12	
Yeast	White Labs Belgian Abbey 1 vial Ale (WLP530) (22 oz starter)	White Labs American Hefeweizen 1 vial (WLP320) (22 oz starter)	Dry Champagne Yeast 2 packs
Water/Treatment	5 gallons DI, 1.12 gallons tap 1 tsp Irish Moss	all tap water 1 tsp Irish Moss	All tap water
Original Gravity			
Maximum	1.111	1.067	1.118
Target	(80% extraction) 1.091	(80% extraction) 1.053	
Measured	1.095		
Primary Gravity	1,041	1.019	
Ending Gravity	1.028	1.017	1.016
Extract Efficiency, %	86%	79%	100%
Apparent Attenuation	71%	68%	
BU/GU	0.30	0.23	
	wt% vol%	wt% vol%	
Potential Alcohol, %	7.04% 8.79%	3.78% 4.73%	
Lock installed	1/25/02	2/22/02	3/10/02
Secondary Fermenter	1/27/02	2/24/02	5/3/02
Days in Primary	6	7	54
Days in Secondary	35	20	44
Primary Fermenter Temp	65°	65°	68°
Secondary Fermenter Temp	65°	65°	68°
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/2	50
Water, cups	2	2	
Number of Bottles	28	26	
Comments			
Brewing	Boiling hops at 50 minutes. 1/4 oz of Styrian and Saaz at 15 minutes, 1/4 oz of Saaz at 2 minutes.	Hops added at 40 minutes.	
Fermentation	Fermentation beginning at 15 hours.	Fermentation finally underway at 40 hours. Cranberries and concentrate added in secondary.	Fermentation beginning at 24 hours.
Beer			First in First Round 2003 AHA NHC. Third in Traditional Mead at 2003 San Diego County Fair.
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.
			Page 68

Sewaring Date	BEER STYLE	Ginger Cinnamon Mead	Temecula Amber Ale	Mash-Hopped American Wheat
Social Content	Proving Date	(Split Mead Batch)	(All Grain)	(Ali Grain)
Primary Fermenter				
Secondary Fermenter	The state of the s			We want of
Mail				
Yeast Nutrients 3 taps Chystal 80°L Mail. 1 ib Red Wheat Malt 4 ibs Yeast Nutrients 3 taps Chiric Acid 2 taps				
Color, MCU 150	Mait	Yeast Nutrients 3 tsps	Control of the Contro	The state of the s
Actual Color, SRM			L .	2.9 2.9
1.5 gallons	Actual Color, SRM			
Temperature 130"-128" 123"-128" Second Rest 80 minutes 41 minutes 42 minutes 43 minutes 44 minutes 4				
Second Rest				-
Secondary Personal Programs 1.15 gallons 1.15	tree tree tree tree tree tree tree tree			
Temperature 168"-145" (152" average 166"-145" (152" average 166" 168				
Third Rest Water, gallons Temperature 168* 168				
Water, gallons Temperature 168* <td< td=""><td>The state of the s</td><td></td><td>150 -145 (152 average)</td><td>150 - 145" (152" average)</td></td<>	The state of the s		150 -145 (152 average)	150 - 145" (152" average)
Mashout Temperature 188* 188 Sparge Water, gallons 2.75 gallons Boiling Time 20 minutes Boiling Time Cascade pellets (6.3%) 1 oz Finishing Hops Cascade pellets (6.3%) 1 oz Finishing Hops Cascade pellets (6.3%) 1 oz BUS 42 (assume equivalent to 30 minutes) Yeast Dry Champagne Yeast 2 packs (WLP001) (22 oz stariar) (WLP202) (22 oz stariar) Water/Treatment All tap water all tap water 1 vial (WLP201) (22 oz stariar) Original Gravity Maximum 1.118 (80% extraction) 1.056 (80% extraction) 1.056 Measured 1.118 (80% extraction) 1.058 (80% extraction) 1.058 (80% extraction) 1.058 Primary Gravity 1.020 1.017 1.01 1.04 Ending Gravity 1.020 1.017 1.01 1.01 Ending Gravity 1.020 1.017 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.02 1.0	Water, gallons			
Soarge Water, gallons 2.75 gallons 2.75 gallons 2.75 gallons 3.00 3			188°	1690
Bolling Time 20 minutes 60 minutes 6				
Bolling Hops		20 minutes		
BUS	WILL THE U.S. PROCESSOR	20 minutes		
IBBUs	Doming Hops		Cascade penets (6.3%)	Cascade pellets (6,5%) 0.75 02
Yeast	Finishing Hops		Cascade pellets (6.3%) 1 oz	
Yeast	IDIII			
(WLP001) (22 oz starter) (WLP320) (22 oz sta		2 0		No.
1 tsp Irish Moss		Dry Champagne Yeast 2 packs		
Maximum	Water/Treatment	All tap water	U. 18.5 (1.18.	
Target	Original Gravity			
Measured	Maximum	1.118	1.070	1.066
Measured 1.118 1.058 1.048 1.049 1.049 1.041 1	Target	1.118	(80% extraction) 1.056	(80% extraction) 1.052
Ending Gravity 1.020 1.017 1.017 1.015 Extract Efficiency, % 100% 83% 71% 73% BU/GU 0.00 0.72 0.44 Potential Alcohol, % 10.29% 12.86% 4.31% 5.38% 3.68% 4.599 Lock Installed 3/10/02 3/28/02 4/30/02 Secondary Fermenter 5/3/02 3/31/02 5/5/02 Days in Primary 54 8 7 Days in Secondary Primary 54 8 7 Days in Secondary Fermenter 68° 65° 65 Priming Sugar, cups Water, cups 1/2 14 13 Primary Fermenter Temp 68° 65° 65 Priming Sugar, cups 2 1/2 1/2 Water, cups 2 3-gallion keg for Temecula 29 Comments Brewing Fermentation beginning at 24 hours. Fermentation beginning at 26 hours. Beer Fourth in Herb/Spice Mead at 2003 San Diego County Fair. Fifth in German Wheat at 2002 San Diego County Fair.	Measured	1.118	1.058	1.048
Ending Gravity	Primary Gravity	1.020	1.019	1.016
Extract Efficiency, % 100% 83% 73%	Ending Gravity	1.020	1.017	1.013
Apparent Attenuation	Extract Efficiency, %	100%	83%	
BU/GU	Apparent Attenuation			73%
Potential Alcohol, %	BU/GU	0.00	0.72	
Potential Alcohol, %				
Lock Installed 3/10/02 3/28/02 4/30/02 Secondary Fermenter 5/3/02 3/31/02 5/5/02 Days in Primary 54 8 7 Days in Secondary 72 14 13 Primary Fermenter Temp 68° 65° 65 Secondary Fermenter Temp 68° 65° 65 Secondary Fermenter Temp 70 68° 70 Secondary Fermenter Temp 70 Secondary 70 Seco	Potential Alcohol, %	10.29% 12.86%		
Secondary Fermenter Days in Primary Days in Secondary Days in Secondary Primary Days in Secondary T2 14 13 Primary Fermenter Temp 68° 65° 65° Friming Sugar, cups Water, cups Number of Bottles Demants Brewing Brewin	Lock Installed			
Days in Primary Days in Secondary Days in Second	Secondary Fermenter			
Days in Secondary Primary Fermenter Temp 68° Secondary Secondary Temp 68° Secondary Fermenter Temp 68° Secondary Secondary Secondary Temp 68° Secondary Second	Days in Primary			
Primary Fermenter Temp 68° Secondary Second	Days in Secondary			
Secondary Fermenter Temp 68° 65° 65° Priming Sugar, cups 1/2 1/2 1/2 Water, cups 2 2 2 Number of Bottles 3-gallon keg for Temecula 29 Comments Brewing Boiling hops added at 50 minutes. 0.5 oz aroma hops added at 10 minutes, 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 16 hours. Beer Fourth in Herb/Spice Mead at 2003 San Diego County Fair.	Primary Fermenter Temp			65°
Priming Sugar, cups Water, cups Number of Bottles Comments Brewing Brewing Boiling hops added at 50 minutes. 0.5 oz flavor hops added at 10 minutes, 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 2002 San Diego County Fair.	Secondary Fermenter Temp			65°
Number of Bottles Comments Brewing Boiling hops added at 50 minutes. 0.5 oz flavor hops added at 10 minutes. 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 16 hours. Fifth in German Wheat at 2002 San Diego County Fair.	Priming Sugar, cups			
Number of Bottles Comments Brewing Boiling hops added at 50 minutes. 0.5 oz flavor hops added at 10 minutes, 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 18 hours. Fifth in German Wheat at 2002 San Diego County Fair.	Water, cups		2	
Brewing Boiling hops added at 50 minutes. 0.5 oz flavor hops added at 10 minutes. 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 16 hours. Fifth in German Wheat at 2002 San Diego County Fair.	Number of Bottles		3-gallon keg for Temecula	29
oz flavor hops added at 10 minutes, 0.5 oz aroma hops added at 2 minutes. Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Beer Fourth in Herb/Spice Mead at 2003 San Diego County Fair. Fifth in German Wheat at 2002 San Diego County Fair	Comments			
Fermentation Fermentation beginning at 24 hours. Fermentation beginning at 24 hours. Fermentation beginning at 16 hours. Beer Fourth in Herb/Spice Mead at 2003 San Diego County Fair. Fermentation beginning at 24 hours. Fermentation beginning at 16 hours. Fermentation beginning at 24 hours. Fermentation beginning at 18 hours. Fourth in German Wheat at 2002 San Diego County Fair			oz flavor hops added at 10 minutes, 0.5	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Diego County Fair. County Fair				Fermentation beginning at 18 hours.
Source of Recipe Custom recipe. Custom recipe. Custom recipe.				Fifth in German Wheat at 2002 San Diego County Fair
	Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.

BEER STYLE	Liz's Apricot Melomei	_	Merlot Pyment #1		Greg's OJ Melomel	-
	(Split Mead Batch)		(Split Mead Batch)		(Still Melomel)	
Brewing Date	5/5/02	8		9		
Bottling Date	9/29/02		11/10/02	-	8/11/02	
Primary Fermenter	5.0 gallo		5.0	gallons		gallon
Secondary Fermenter	2.8 gallo	กร		gallons	1.0	gallon
Malt	Orange Blossom Honey 18 Oregon Apricot Puree 6 I	bs ad	Orange Blossom Honey Alexander's Merlot Concentrate	18 lbs 3 lbs	Clover Honey Orange Juice Concentrate	3 lbs 1 lb
		sps	Yeast Nutrients	3 tsps	Yeast Nutrients	1 tsp
	See Mead Log		See Mead Log			
Color, SRM Color, MCU Actual Color, SRM						
First Rest Water, gallons Temperature						
Second Rest Water, gallons Temperature						
Third Rest Water, gallons Temperature						
Mashout Temperature						
Sparge Water, gallons		_				
Bolling Time	30 minutes at	1000	30 minutes	at 100°	20 minute	e at 100°
Boiling Hops	30 Hilliages at	100	30 minutes	at 190	20 militate	28 AL 190
Finishing Hops						A
IBUs						
Yeast	Red Star Flor Sherry Yeast 2 pa	acks	Red Star Flor Sherry Yeast	2 packs	Red Star Champagne Yeast	1 pack
Water/Treatment	All tap water	-	All tap water		All tap water	
Original Gravity				-	**************************************	
Maximum	1	.136		1.136		1.135
Target	1	.136		1.136		1.135
Measured	1	.136		1.136		1.135
Primary Gravity	1	.020		1.020	1	1.020
Ending Gravity	1	.020		1.020		1.020
Extract Efficiency, %		00%		100%		100%
Apparent Attenuation		85%		85%		85%
BU/GU		0.00		0.00		0.00
Potential Alcohol, %		vo1%	wt%	vol%	wt%	
Lock Installed	5/5/02	/0	5/5/02	10.20/0	5/5/02	
Secondary Fermenter	6/16/02	-	6/16/02		6/30/02	
Days in Primary	42	-	42		56	
Days in Secondary	105	-	147		42	
Primary Fermenter Temp	105	65"		65°		
Secondary Fermenter Temp Priming Sugar, cups		65°		68°-60°		65° 68°-60°
Water, cups						
Number of Bottles		-				
Comments						
Brewing			2			
Fermentation	First signs of fermentation at 26 hou	rs.	First signs of fermentation at 20	6 hours.	Fermentation underway at 2	4 hours.
Beer						
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	
		-			Page	70

BEER STYLE	Conventional American Wheat	American Dark Lager	Robust Porter
Brewing Date	(All Grain) 5/11/02 11	(All Grain) 5/19/02 12	(All Grain) 5/26/02 13
Bottling Date	6/2/02	6/9/02	6/9/02
	The state of the s		No. of the contract of the con
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 2 lbs	Belgian Pilsner Malt 4.5 lbs	
	Red Wheat Malt 4 lbs	Carapils Malt 1 lb	Crystal 60°L Malt 1 lb
		Black Patent Malt 3 oz	Chocolate Malt 1 lb
		Flaked Barley 4 oz	Flaked Oats 4 oz
			Unsweetened Chocolate 4 oz
	1		
		L	
Color, SRM	2.84	16	33.8
Color, MCU	2.84	29	110
Actual Color, SRM			
First Rest	10 minutes	10 minutes	15 minutes
Water, gallons	1.35 gallons		1.86 gallons
Temperature	122°-121°	122°-121°	125°-127°
Second Rest	50 minutes		The same of the sa
Water, gallons	1.15 gallons	(1.7.70×40.00) (1.7.70×40.00)	
Temperature	152°-145° (150° average)		154°-147° (150° average)
Third Rest	102 -145 (150 average)	104 - 145 (102 average)	104 - 147 (100 average)
	1		
Water, gallons	ł		
Temperature			
Mashout Temperature	166°	168°	168°
Sparge Water, gallons	2.75 gallons		
Boiling Time	60 minutes		60 minutes
Boiling Hops	Cascade pellets (6.3%) 0.75 oz	Saaz pellets (4.5%) 0.5 oz	Cascade pellets (6.3%) 1 oz
		16 15 E	8 2 2
Finishing Hops		Saaz pellets (4.5%) 0.5 oz	Cascade pellets (6.3%) 0.5 oz
		, , , , , , , , , , , , , , , , , , , ,	
N.	ł		1
V)	1		l .
IBUs	26.4	16.7	40
Yeast			
Teast	(WLP320) (22 oz starter)	White Labs American Lager 1 vial	White Labs California Ale 1 vial
Water/Treatment		(WLP840) (22 oz starter)	(WLP001) (22 oz starter)
vvater, i realitient	all tap water 1 tsp Irish Moss	all tap water	all tap water
Original County	i isp iiisii woss	1 tsp Irish Moss	1 tsp Irish Moss
Original Gravity	CATAGORIA	to constant	PSI Psi et al
Maximum	1.064	147.577.1	1.080
Target	(80% extraction) 1.051	1000000	(80% extraction) 1.064
Measured	1.046	1.050	1.064
Primary Gravity	1.016	1.014	1.018
Ending Gravity	1.013	1.014	1.018
Extract Efficiency, %	72%	N/309 31/13	
Apparent Attenuation	72%	72%	
BU/GU	0.57		
	wt% vol%		wt% vol%
Potential Alcohol, %	3.47% 4.33%		
Lock Installed	5/14/02		
wedder to be seen between the control of the contro		5/23/02	5/31/02
Secondary Fermenter	5/18/02	5/26/02	6/2/02
Days in Primary	7	7	7
Days in Secondary	15	14	7
Primary Fermenter Temp	65°	62°-66°	66°
Secondary Fermenter Temp	65°	62°	66°
Priming Sugar, cups	1/2	1/2	1/2
Water, cups	2	2	2
Number of Bottles	29	28	29
Comments	1		23
Brewing	Hope added at 50 minutes	O.E. a. hone added at 60 relevtes. O.S. a. at	Ballian has added at 50 minutes
Diewing	Hops added at 50 minutes.	0.5 oz hops added at 50 minutes, 0.2 oz at	
	1	15 minutes, 0.2 oz at 5 minutes, 0.1 oz at 2	
Company	<u> </u>	minutes.	minutes
Fermentation	Fermentation beginning at 16 hours.	Fermentation evident at 27 hours.	Fermentation active at 17 hours.
Beer	Second in American Wheat at 2002 San	Fourth at 2002 San Diego County Fair.	
	Diego County Fair	First in Light Lagers at Mammoth HBC.	
		QUAFF representative for AHA Club-Only.	
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.
Source of Recipe			

BEER STYLE	Cyser (Still Melomel)	Lemon Melomel	American Amber Ale
Brewing Date	6/2/02 14	(Still Melomel) 6/2/02 15	(All Grain)
	12/22/02		7/7/02 16 7/28/02
Bottling Date		11/2/02	
Primary Fermenter	1.0 gallon	1.0 gallon	3.0 gallons
Secondary Fermenter	1.0 gallon	1.0 gallon	2.8 gallons
Malt	See Mead Log	See Mead Log	American Two-Row Malt 6 lbs Crystal 80°L Malt 1 lb
Color, SRM Color, MCU Actual Color, SRM			15.2 24.8
First Rest Water, gallons Temperature			10 minutes 1.62 gallons
Second Rest			123'
			50 minutes
Water, gallons	1		1.38 gallons
Temperature		U	154°-149° (151° average
Third Rest Water, gallons Temperature			
Mashout Temperature			166
Sparge Water, gallons			2.5 gallons
Boiling Time			60 minutes
Boiling Hops			
politing Flops			Cascade pellets (6.3%) 1 oz
Finishing Hops			Cascade pellets (6.3%) 0.5 oz
IBUs			38.6
Yeast		Ti and the second secon	White Labs California Ale 1 vial
Water/Treatment			(WLP001) (22 oz starter) all tap water
			1 tsp Irish Moss
Original Gravity Maximum Target Measured Primary Gravity Ending Gravity Extract Efficiency, % Apparent Attenuation BU/GU		ii.	1.07 (80% extraction) 1.05 1.06 1.01 1.01 859 739
20,00			0.68
Potential Alcohol, %			wt% vol9 4.62% 5.789
Secondary Fermenter			7/13/02
Days in Primary			7/14/02
Down in Constitution			7
Days in Secondary			14
Primary Fermenter Temp			66
Secondary Fermenter Temp Priming Sugar, cups			66 1/2
Water, cups			2
Number of Bottles			27
Comments			21
Brewing			Boiling hops added at 50 minutes. 0.25 oz at 15 minutes and 0.25 oz at 5 minutes
Fermentation			Fermentation active at 18 hours.
Beer	Third in 2003 San Diego Mead Festival		
Source of Recipe			Custom recipe.

BEER STYLE	Riesling Pyment	Belgian Strong Dark Ale	Liz's Traditional Mead
Proving Date	(Still Melomel) 8/3/02 17	(Ali Grain)	(Mead)
Brewing Date	8/3/02 17 12/22/02	8/4/02 18	8/17/02 19
Bottling Date		8/24/02	
Primary Fermenter	3.0 gallon	3.0 gallons	1.0 gallon
Secondary Fermenter	2.8 gallon	2,8 gallons	1.0 gallon
Małt	See Mead Log	Belgian Pilsner Malt 9 lbs Special B Malt 1 lb Dark Brown Sugar 1 lb	See Mead Log
Color, SRM Color, MCU Actual Color, SRM		18.2 38.7	
First Rest			
		15 minutes	
Water, gallons		2.25 gallons	
Temperature		124°-123°	
Second Rest		75 minutes	
Water, gallons		2.0 gallons	
Temperature		155°-150° (152° average)	
Third Rest Water, gallons Temperature			
Mashout Temperature		169°	
Sparge Water, gallons		2.0 gallons	
Bolling Time		75 minutes	
Boiling Hops		Kent Golding pellets (6.6%) 0.5 oz	
		U.S. Saaz pellets (4.5%) 0.5 oz	
Finishing Hops		Kent Golding pellets (6.6%) 0.5 oz U.S. Saaz pellets (4.5%) 0.5 oz	
IBUs		32	
Yeast		White Labs Belglan Abbey 1 vial	
Water/Treatment		(WLP530) (22 oz starter) all tap water 1 tsp Irish Moss	
Original Gravity Maximum Target Measured Primary Gravity Ending Gravity Extract Efficiency, % Apparent Attenuation BU/GU		1.112 (80% extraction) 1.092 1.090 1.024 1.020 80% 78%	
Borgo		0.36	
Potential Alcohol, %		wt% vol%	
Lock Installed		7.35% 9.19%	
Secondary Fermenter		8/7/02	
Days In Primary		8/11/02	
Days in Secondary		7	
		13	
Primary Fermenter Temp		66°	
Secondary Fermenter Temp		66°	
Priming Sugar, cups		1/3	
Water, cups		2	
Number of Bottles		28	
Comments			
Brewing		Boiling hops added at 50 minutes. 0.5 oz at 15 minutes and 0.5 oz at 5 minutes. Saaz and Goldings split evenly.	
Fermentation		Fermentation very active at 27 hours.	
Beer Source of Recipe	Second in Fruit Meads at 2003 AFC. Fourth In Fruit Meads at 2003 San Diego County Fair. Second in Melomels at 2003 San Diego Mead Festival	Custom as days	Out to
adding of Necibe		Custom recipe.	Custom recipe. Page 73

BEER STYLE	Liz's Tripel	Liz's Weizen	Braggot
	(All Grain)	(All Grain)	(All Grain/Mead)
Brewing Date	8/18/02 20		9/22/02 22
Bottling Date	9/2/02	9/15/02	11/10/02
Primary Fermenter	3.0 gallons	3.0 gallons	3.0 gallons
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallons
Malt	Belgian Pilsner Malt 6 lbs	Two-Row Malt 2 lbs	Two-Row Malt 5 lbs
	German Pilsner Malt 1.5 lbs	Red Wheat Malt 4 lbs	Crystal 90°L Malt 1 lb
	Two-Row Mait 1.5 lbs		Orange Blossom Honey 5 lbs
	Cara Pils Malt 1 lb		,
			II.
1		l.	
Color, SRM			<u></u>
The state of the s	4.7	2.8	15.3
Color, MCU	4.7	2,8	25.5
Actual Color, SRM			
First Rest	15 minutes	10 minutes	10 minutes
Water, gallons	2.25 gallons	1.5 gallons	1.37 gallons
Temperature	128°-125°	125°-124°	125°-124°
Second Rest	75 minutes	50 minutes	
Water, gallons	2.0 gallons		
Temperature	158°-146° (150° average)	152°-146° (148° average)	154°-150° (151° average)
Third Rest	, oo 140 (100 dverage)	102 140 (140 average)	104-100 (101 average
Water, gallons			
Temperature			
Mashout Temperature	169°	169°	170°
Sparge Water, gallons	2.0 gallons		2.5 gailons
Boiling Time	60 minutes	60 minutes	60 minutes
Boiling Hops	U.S. Saaz pellets (4.5%) 1 oz	Czech Saaz pellets (3.9%) 0.75 oz	
ľ.			
Finishing Hops	U.S. Saaz pellets (4.5%) 1 oz		
	()		1
IBUs			
	26		
Yeast	White Labs Trappist Ale 1 vial	White Labs Hefeweizen 1 vial	White Labs Belgian Abbey 1 vial
	(WLP500) (22 oz starter)	(WLP300) (22 oz starter)	(WLP530) (22 oz starter)
Water/Treatment	5 gal DI, 1.25 gal tap water	All tap water	All tap water
	1 tsp Irish Moss	1 tsp Irish Moss	No Irish Moss
Original Gravity			
Maximum	1.111	1.064	1.126
Target	(80% extraction) 1.091	(80% extraction) 1.051	(80% extraction) 1.110
Measured	1.090	1.050	
Primary Gravity	1.020		
Ending Gravity		1.014	1.058
Extract Efficiency, %	1.016	1.013	1.032
	81%	78%	81%
Apparent Attenuation	82%	74%	0+
BU/GU	0.29	0.32	0.00
	wt% vol%	wt% vol%	wt% vol%
Potential Alcohol, %	7.77% 9.71%	3.89% 4.86%	7.35% 9.19%
Lock Installed	8/22/02	8/30/02	9/26/02
Secondary Fermenter	8/24/02	9/2/02	9/29/02
Days in Primary	6	8	- Andrewson
Days in Secondary	9		7
Primary Fermenter Temp		13	42
	66°	66°	66°
Secondary Fermenter Temp	66°	66°	66°
Priming Sugar, cups	1/2	1/2	1/3
Water, cups	2	2	2
Number of Bottles	28	28	27
Comments			
Brewing	Boiling hops added at 50 minutes. 0.5 oz	Hops added at 50 minutes.	Honey added after boil.
· - · · · · · · · · · · ·	at 15 minutes and 0.5 oz at 5 minutes.	riope added at 50 minutes.	noney added after bolt.
	at 10 minutes and 0.5 02 at 5 minutes.		
Formaniation	Farmantation		
Fermentation	Fermentation very active at 27 hours.	Fermentation very active at 12 hours.	Fermentation active at 36 hours. Dry
1			Champagne yeast added to secondary.
			Tertiary fermenter on 10/26.
Beer			Third in 2003 San Diego Mead Festival.
		ll l	
		1)	
	1	U'	
Source of Recipe	Custom	Outdoor	
source or idecibe	Custom recipe.	Custom recipe.	Custom recipe.
			Page 74

BEER STYLE	Merlot Pyment #2	Rosemary Metheglin	Traditional Mead
	(Mead)	(Mead)	(Mead)
Brewing Date	10/6/2002 23	10/6/2002 23	10/6/2002 24
Bottling Date	3/7/2003		
Primary Fermenter	3.0 gallon	1.0 gallon	1.0 gallon
Secondary Fermenter	2.8 gallon	1.0 gallon	1.0 gallon
Malt	Zio ganon	1.0 92.10.1	
	See Mead Log	See Mead Log	See Mead Log
Color, SRM Color, MCU			
Actual Color, SRM First Rest			
Water, gallons	l l		
Temperature			
Second Rest			
Water, gallons	ı l		
Temperature		N .	
Third Rest			
Water, gallons			
Tomporature			
Temperature			
Mashout Temperature			
Sparge Water, gallons			
Boiling Time			
Boiling Hops			
Finlshing Hops			
IBUs			
Yeast			
Water/Treatment			
Original Gravity Maximum Target Measured Primary Gravity Ending Gravity Extract Efficiency, % Apparent Attenuation BU/GU			
Potential Alcohol, %			
Lock Installed			
Secondary Fermenter			
Days in Primary			
Days in Secondary			
Primary Fermenter Temp			
Secondary Fermenter Temp			
Priming Sugar, cups			
Water, cups			
Number of Bottles			
Comments			
Brewing			
Fermentation			
Beer			
Source of Recipe			Page 75

BEER STYLE	Ginger Weisse	Chocolate Coffee Porter	English Pale Ale
	(All Grain)	(All Grain)	(All Grain)
Brewing Date	10/19/2002 25	10/27/2002 26	11/29/2002 27
Bottling Date	11/9/2002	11/17/2002	12/21/2002
Primary Fermenter	3.0 gallons	3.0 gallons	3.0 gallons
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallons
Mall	German Pilsner Malt 2 lbs German Wheat Malt 1.5 lbs Flaked Barley 8 oz	Two-Row Malt 5 lbs Crystal 40°L Malt 1 lb Chocolate Malt 12 oz Black Patent Malt 4 oz Flaked Barley 8 oz Unsweetened Chocolate 8 oz	Two-Row Malt 6.5 lbs Crystal 40°L Malt 8 oz
Color, SRM Color, MCU Actual Color, SRM	1.9 1.9	35.6 118	10.5 10.8
First Rest	10 minutes	15 minutes	10 minutes
CHRISTINGSTEEL	100	777. 9	
Water, gallons	1.0 gallon		1.5 gallons
Temperature	120°	120°-122°	129°-128°
Second Rest	60 minutes		80 minutes
Water, gallons	1.0 gallon		
Temperature	153°-152° (152° average)	154°-152° (152" average)	158°-152° (152° average)
Third Rest Water, gallons Temperature			
Mashout Temperature	166°	4000	4000
		166°	166°
Sparge Water, gallons	3.0 gallons		
Boiling Time	60 minutes		
Boiling Hops	Czech Saaz pellets (3.9%) 0.25 oz	Hallertauer pellets (4.7%) 1 oz	Kent Golding pellets (6.6%) 1 oz
Finishing Hops	Ginger 2 oz Cinnamon 2 sticks	Chocolate coffee 6 oz	Kent Golding pellets (6.6%) 1 oz
IBUs		05.5	
	5.7	25.5	
Yeast	White Labs German Ale 1 vial	White Labs Irish Ale (WLP004) 1 vial	White Labs English Ale 1 vial
Water/Treatment	(WLP029) (22 oz starter) All tap water	(22 oz starter) All tap water	(WLP002) (22 oz starter) All tap water + 10 g CaSO4
	1 tsp Irish Moss	1 tsp Irish Moss	1 tsp Irish Moss
Original Gravity			
Maximum	1.043		
Target	(80% extraction) 1.034	(80% extraction) 1.059	` '
Measured	1.033	1.057	1.055
Primary Gravity	1.009	1.024	
Ending Gravity	1.009	1.024	1.018
Extract Efficiency, %	77%	78%	76%
Apparent Attenuation	73%	58%	67%
BU/GU	0.17	0.45	0.89
	wt% vol%		
Potential Alcohol, %	2.52% 3.15%	3.46% 4.33%	3.88% 4.86%
Lock Installed	10/23/2002	10/31/2002	12/3/2002
Secondary Fermenter	10/26/2002	11/2/2002	12/7/2002
Days in Primary	7	6	8
Days in Secondary	14	15	14
Primary Fermenter Temp	66°	66°	66°
Secondary Fermenter Temp		66°	66°
Priming Sugar, cups	1/2	1/3	1/3
Water, cups	2	2	2
Number of Bottles	27	29	28
Comments			
Brewing	Hops added at 50 minutes. 1 tsp lactic acid added to sparge water. 1/4 oz lactic acid added before bottling.	Chocolate added at first wort. Hops added at 50 minutes. Chocolate coffee brewed in 12 cups, added at end of boil.	Boiling hops added at first wort. 0.5 oz added at 15 minutes, 0.5 oz added at 2 minutes.
Fermentation	Fermentation beginning at 28 hours.	Fermentation beginning at 28 hours.	Fermentation active at 18 hours.
Beer	First in Specialty Beers at 2003 AFC.		
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe. Page 76

DEED ONG E			
BEER STYLE	Bohemian Pilsner	Bamberg Rauchbier (All Grain)	Southern English Brown Ale (All Grain)
Brewing Date	(All Grain) 1/1/2003 1	1/4/2003 2	1/25/2003 3
Bottling Date	2/1/2003	2/2/2003	2/18/2003
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 5.5 lbs	Rauch Malt 6 lbs	Hugh Baird Pale Malt 4 lbs
	Munich Malt 0.5 lbs	Munich Malt 1.5 lbs	Crystal 120°L Malt 2 lbs
l .	CaraPils Malt 1 lb	CaraPils Malt 1 lb	
l	Flaked Barley 4 oz	Flaked Barley 4 oz	
	New York	7,1000000	
1			
Color, SRM	4	14.5	25.5
Color, MCU	4	21.7	72
Actual Color, SRM			44
First Rest	40 minutes	30 minutes	11 minutes
Water, gallons Temperature	2.75 gallons	3.25 gallons	1.5 gallons 124°-122°
Second Rest	132° 60 minutes	122°-128° 70 minutes	60 minutes
Water, gallons	~1.3 gallons decection	~1.6 gallons decection	
Temperature	150°-154° (152° average)	~1.5 gallons decoction 150°-154° (152° average)	156°-150" (152° average)
Third Rest	100 -104 (102 average)	130 - 134 (132 average)	150 -150 (152 average)
Water, gallons			1
Temperature			
Mashout Temperature	170°	167"	167°
Sparge Water, gallons	4.0 gallons	3.0 gallons	2.25 gallons
Boiling Time	90 minutes	100 minutes	
Boiling Hops	Saaz pellets (3.9%) 1.65 oz		Kent Golding pellets (6.6%) 0.5 oz
Company of the control of the contro	National Analysis and Asserting	Control of the Control of Control	The state of the s
Finishing Hops	Saaz pellets (3.9%) 1 oz		
IBUs	40	22.6	18.4
Yeast	White Labs Czech Pilsner 1 vial	White Labs German Lager 1 vial	White Labs British Ale 1 vial
	(WLP800) (22 oz starter)	(WLP830) (22 oz starter)	(WLP005) (22 oz starter)
Water/Treatment	E college DL 4.5 college to system		FAULT
vvater/ reatment	5 gallons DI, 1.5 gallons tap water 1 tsp trish Moss	All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss
Original Gravity	1 top illali lviosa	Trap man wosa	Trap ilisii ivoss
Maximum	1.072	1.086	1.063
Target	(80% extraction) 1.057	(80% extraction) 1.068	
Measured	1.054	1.076	U.V.A.A.6-172
Primary Gravity	1.014	1.023	
Ending Gravity	1.014	1.023	1.019
Extract Efficiency, %	75%		
Apparent Attenuation	74%	The state of the s	
BÚ/GU	0.74		
	wt% vol%	wt% vol%	wt% vol%
Potential Alcohol, %	4.20% 5.25%		
Lock Installed	1/4/2003	1/11/2003	2/1/2003
Secondary Fermenter	1/11/2003	1/12/2003	2/2/2003
Days in Primary	10	8	8
Days in Secondary	21	21	16
Primary Fermenter Temp	55°-62°	62°	62°
Secondary Fermenter Temp	60°	62°	62*
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/2	Corn Sugar 1/3
Water, cups Number of Bottles	2	9	2
	30	35	29
Comments	Double describes P. W. J. 188	B	11
Brewing	Double decoction. Boiling hops at 50	Double decoction. Hops at 50	Hops added at 50 minutes.
	minutes. 1/4 oz each at 15, 10, 5, and	minutes. Diluted with 1/2 gallon	l
	2 minutes.	water at bottling. OG = 1.065, FG =	I
Fermentation	Formaniation action at 45 hours	1.017	E
rementation	Fermentation active at 15 hours.	Fermentation beginning at 17 hours.	Fermentation underway at 18 hours.
Beer	First in European Pale Lagers at 2003	First in Smaked Bases and BCC	
2001	AFC. Second in Classic Pilsner at	First in Smoked Beers and BOS	
	2003 San Diego County Fair.	Second Runner-Up at 2003 AFC. First in German Specialty Beers at	
	2000 Can Diogo County Fall.	2003 QUAFF Oktoberfest.	
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.
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Source of Recipe

Custom recipe.

Custom recipe.

DEED CTVI E	CARLES AND			
BEER STYLE	Straight Lambic (All Grain - Split Batch)	Frambozen Lambic (Ali Grain - Split Batch)	Northern German Pilsner	
Brewing Date	5/10/2003 7	(All Grain - Spitt Batch) 5/10/2003 8	(All Grain) 6 5/25/2003	
Bottling Date	6/8/2003	6/29/2003	6/7/2003	
Primary Fermenter	5.0 gallons	5.0 gallons	3.0 gallons	
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallons	
Malt	American Two-Row Malt 5 lbs	American Two-Row Malt 5 lbs	German Pilsner Malt 5 lbs	
	Red Wheat Malt 5 lbs	Red Wheat Malt 5 lbs	CaraPils Malt 1 lb	
	Crystal 60°L Malt 8 oz	Crystal 60°L Malt 8 oz	Flaked Barley 2 oz	
		300	10100	
		Frozen raspberries 3 lbs		
		Raspberry concentrate 12 oz		
Color, SRM	8.45	8.45	2.65	
Color, MCU	8.45	8.45	2.65	
Actual Color, SRM First Rest		72 11 1		
Water, gallons	15 minutes	15 minutes	13 minutes	
Temperature	2.37 gallons	■ 10 mm = 10	1.37 gallons	
Second Rest	120° 75 minutes	120°	124°	
Water, gallons	2.13 gallons	75 minutes 2.13 gallons	60 minutes 1.38 gallons	
Temperature	2.13 gallons 152°-157° (152° average)	2.13 gallons 152°-157° (152° average)	1.36 gallons 150°-152° (150° average)	
Third Rest	102 -107 (102 average)	102 - 107 (102 average)	150 *152 (150 average)	
Water, gallons				
Temperature				
Mashout Temperature	169°	169°	167°	
Sparge Water, gallons	3.5 gallons		2.75 gallons	
Boiling Time	60 minutes		60 minutes	
Boiling Hops	Old Fuggles pellets (4.3%) 0.5 oz	Old Fuggles pellets (4.3%) 0.5 oz	Tettnanger pellets (5.6%) 0.5 oz	
		,	Hallertauer pellets (4.5%) 0.5 oz	
Finishing Hops			Tettnanger pellets (5.6%) 0.5 oz	
	1		Hallertauer pellets (4.5%) 0.5 oz	
	1			
IBUs	7.7	7.7	34.8	
Yeast	White Labs California Ale 1 vial		White Labs German Lager 1 vial	
	(WLP001), Wyeast Lambic 1 pack		(WLP830) (22 oz starter)	
Water/Treatment	Blend (3278) (22 oz starters) 6 gallons DI, 2 gallons tap water	(3278) (22 oz starters)	All day water	
vater/110atment	1 tsp Irish Moss	6 gallons DI, 2 gallons tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss	
Original Gravity	T TOP WICH WICKS	r tap illait woaa	i tap ilian ivosa	
Maximum	1,071	1.071	1.062	
Target	(80% extraction) 1.057	(80% extraction) 1.057	(80% extraction) 1.050	
Measured	1.053		1.049	
Primary Gravity	1.016			
Ending Gravity	1.014	AND THE PROPERTY OF THE PROPER	1.013	
Extract Efficiency, %	75%			
Apparent Attenuation	74%			
BU/GU	0.15	0.15	0.71	
alle construction and are an	wt% vol%	wt% vol%	wt% vol%	
Potential Alcohol, %	4.09% 5.12%	4.41% 5.51%	3.99% 4.99%	
Lock Installed	5/16/2003	5/16/2003	5/29/2003	
Secondary Fermenter	5/18/2003	5/18/2003	5/31/2003	
Days in Primary	8	8	6	
Days in Secondary	21	42	7	
Primary Fermenter Temp	65°	65°	62°-68°	
Secondary Fermenter Temp	65°	65°	50°-68°	
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/2	Corn Sugar 1/2	
Water, cups Number of Bottles	2	2	2	
	24	28	28	
Comments	Have added at 80 miles	(1		
Brewing	Hops added at 50 minutes.	Hops added at 50 minutes. Transfer to	Boiling hops added at 45 min. Finishing	
		tertiary on 6/8/2003. Secondary gravity =	hops split evenly at 15 minutes and 2	
		1.011	minutes.	
Fermentation	Fermentation active at 24 hours. 1/2 oz	Formaniation action at 24 hours	Formantation hasinain 4.47 has	
, omontation	lactic acid added at bottling.	Fermentation active at 24 hours.	Fermentation beginning at 17 hours.	
Beer	iacile acid added at betting.		Second in German Light Lager and	
व सार्वेद्धार ।			Fourth in Classic Pilsner at 2003 SD	
			County Fair First in German Pale Lager	
		,	at 2003 QUAFF Oktoberfest	
Source of Recipe	Custom recipe.	Custom recipe.		
		The state of the s	Custom recipe.	

BEER STYLE	Foreign Coffee Stout	Bavarian Hefeweizen	Northern German Altbier
CHINADA SABASANINE	(All Grain)	(All Grain)	(All Grain)
Brewing Date	7/4/2003 10	8/16/2003 11	8/31/2003
Bottling Date	7/27/2003	9/6/2003	9/21/2003
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 Crystal 60°L Malt Roasted Barley French Roast ground coffee (in 12 cups) 7 lbs 1.5 lb 1 lb	German Pilsner Malt 2 lbs German Wheat Malt 4.5 lbs	German Pilsner Malt 4 lbs German Munich Malt 2.5 lb Black Patent Malt 2 oz
Color, SRM Color, MCU	34.6 113	3.1 3.1	15 25
Actual Color, SRM First Rest			
Water, gallons	20 minutes	15 minutes	15 minute
Temperature	2.13 gallons 125°-123°	1.5 gallons	1.5 gallor
Second Rest		120°	122°-124
Water, gallons	70 minutes 1.75 gallons	75 minutes	75 minute
Temperature	1.75 gallons 150°-146° (148° average)	1.25 gallons 142°-148° (145° average)	1.5 gallor
Third Rest	150 - 140 (140 average)	142"-140" (145" average)	146°-156° (152° average
Water, gallons Temperature	-		
Mashout Temperature	170°	170°	400
Sparge Water, gallons	170° 2 gallons		168 2.5 gollon
Boiling Time	2 gallons 60 minutes	2.75 gallons	2.5 gallon
Boiling Hops	Kent Golding pellets (6.9%) 1 oz	Hallertauer pellets (4.5%) 0.5 oz	Spalt pellets (4.5%) 1.5 oz
Doming Flops	Rent Golding periors (0.9%)	rialiertauer peliets (4.5%) 0.5 02	Spair peliers (4.5%) 1.5 02
Finishing Hops			Spalt pellets (4.5%) 0.5 oz
BUs	37	12.5	4
Yeast	White Labs Irish Ale (WLP004) 1 vial (22 oz starter)	White Labs Hefeweizen Ale 1 vial (WLP300) (22 oz starter)	White Labs Alt/Kolsch Ale 1 vial (WLP029) (22 oz starter)
Water/Treatment	All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss
Original Gravity			
Maximum Target Measured	1.094 (80% extraction) 1.075 1.070	1.071 (80% extraction) 1.056 1.050	1.06 (80% extraction) 1.05 1.04
Primary Gravity	1.024	1.014	1.01
Ending Gravity	1.024	1.014	1.0
Extract Efficiency, %	74%	70%	73
Apparent Attenuation	66%	72%	67
BU/GU	0.53	0.25	0.0
D-440-1 Al1- 1 01	wt% val%	wt% vol%	wt% vol
Potential Alcohol, %	4.83% 6.04%	3.78% 4.73%	3.36% 4.20
Lock Installed	7/6/2003	8/20/2003	9/5/2003
Secondary Fermenter	7/12/2003	8/23/2003	9/6/2003
Days in Primary Days in Secondary	8	7	6
	15	14	15
Primary Fermenter Temp Secondary Fermenter Temp	65°	68°	6
Priming Sugar, cups	Corn Sugar	68°	6
Vater, cups	Corn Sugar 1/3	Corn Sugar 1/2	Com Sugar 1/2
Number of Bottles	2 28	2 27	2
Comments		27	30
Brewing	Hops added at 60 mlnutes. Coffee added while cooling.	Hops added at 50 min.	Hops added at 50 min and 15 min.
Fermentation	Fermentation very active at 17 hours.	Explosive fermentation at 17 hours.	Explosive fermentation at 17 hours
Beer		Third in Wheat Beers in 2003 California State Homebrew Competition.	Third in German ales in 2003 QUAF Oktoberfest. Second in Mixed Style in 2003 California State Homebrew Competition.
	Ouete- sestion	Oustonl	
ource of Recipe	Custom recipe.	Custom recipe.	Custom recipe.

Inces says e	Balaine Talani	A Long Books Miles	Sun a
BEER STYLE	Belgian Tripel	American Barley Wine	Cyser Melomel
Brewing Date	(Ali Grain) 9/20/2003 13	(All Grain) 10/4/2003 14	10/18/2003 18
Bottling Date	10/12/2003	10/25/2003	10/10/2003
Primary Fermenter	3.0 gallons	3.0 gallons	3.0 gallon
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallon
Malt	Belgian Pilsner Malt 10 lbs	American Two-Row Malt 12 lbs	Z.O ganon
	CaraPils Malt 1 lb	Crystal 40°L Malt 2 lbs	
	Corn Sugar 8 oz	Brown Sugar 1 lb	
	Cane Sugar 8 oz	Diomi Gugai	See Mead Log
	ound dagai		oco mada nog
6	1		
Color, SRM	5.3	15.5	
Color, MCU	5.3	26.5	
Actual Color, SRM		· · · · · · · · · · · · · · · · · · ·	
First Rest	20 minutes	20 minutes	
Water, gallons	2.25 gallons	2.75 gallons	
Temperature	128°-129°	120°	
Second Rest	70 minutes	110 minutes	
Water, gallons	2.0 gallons	7900	
Temperature	150°-157° (154° average)	144°-157° (150° average)	<u></u>
Third Rest	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Water, gallons			ľ
Temperature			
Mashout Temperature	168°	168°	
Sparge Water, gallons	2.5 gallons	2.5 gallons	
Boiling Time	100 minutes	140 minutes	
Boiling Hops	Kent Golding pellets (6.6%) 0.4 oz	Centennial pellets (9.1%) 2 oz	
	Saaz pellets (3.9%) 0.4 oz	2 3 3	
Finishing Hops		Cascade pellets (6.6%) 1 oz	
	Saaz pellets (3.9%) 0.6 oz	Cascade flowers (?.?%) (dry) 1 oz	
		1	
BUs	27.5	93	
Yeast	White Labs Abbey Ale 1 vial	White Labs Dry English Ale 1 vial	
	(WLP530) (22 oz starter)	(WLP007) (22 oz starter)	
Water/Treatment	5 gallons DI, 1.5 gallons tap water	All tap water	
Original Gravity	1 tsp Irish Moss	1 tsp Irlsh Moss	
Maximum	4.400	4.440	
	1.120	11117	
Target	(75% extraction) 1.093	(75% extraction) 1.115	
Measured Primary Gravity	1.094	1.105	
Ending Gravity	1.030	1.046	
Extract Efficiency, %	1.027	1.037	
Appendiction of the second sec	78%		
Apparent Attenuation BU/GU	71%		
DO/30	0.29 wt% vol%		
Potential Alcohol, %	7.04% 8.79%		
Lock Installed	9/27/2003	10/10/2003	
Secondary Fermenter	9/28/2003	10/10/2003	
Days in Primary			
Days in Secondary	8 14	9	
Primary Fermenter Temp	68°		
Secondary Fermenter Temp	68°	68°	
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/3	
Water, cups	2	Com Sugar 1/3	
Number of Bottles	27	22	
Comments			
Brewing	Boiling hops added at 50 min.	Boiling hops added at 80 min.	
	Finishing hops split evenly at 15, 10,	Finishing hops split evenly at 20 and	
	and 2 min.		
	ano ∠ min.	2 min. 1 oz of dry hops added in	
Fermentation	Active formantation at 40 have	secondary	
i dillicinatioli	Active fermentation at 16 hours.	Active fermentation at 16 hours. Jon	
Beer		Peterson's hops for dry hops.	
D001			
			ľ
	l .		
Source of Recipe	Custom recipe.	Custom recipe.	
	A Castonii Iddipo.	Ouston recipe.	

BEER STYLE	Holiday Old Ale	_	Scottish Export		Scotch Ale	
	(All Grain)		(All Grain)		(All Grain)	
Brewing Date	11/16/2003 16		11/28/2003	17		
Bottling Date	12/6/2003		12/21/2003		1/3/2004	
Primary Fermenter		gallons		gallons		gallons
Secondary Fermenter		gallons		gallons		gallons
Malt	American Two-Row Malt	7 lbs	British Pale Malt	5 lbs	British Pale Malt	9 lbs
	Crystal 20°L Malt	1 lb	Crystal 60°L Malt	1 lb	Crystal 70°L Malt	1 lb
	Crystal 90°L Malt	1 lb	German Rauch Malt	8 oz	German Rauch Malt	8 oz
	Brown Sugar	1 lb	Chocolate Malt	2 oz	Chocolate Malt	2 02
	District Gaga.	, ,,,	Chicolato Mai			
						- 10
Color, SRM		17.2		17.1		19
Color, MCU		34.1	1	33.8		42.1
Actual Color, SRM						
First Rest	20 1	minutes	8	minutes	20	minutes
Water, gallons	1.75	gallons	1.5	gallons	2.29	5 gallons
Temperature	12	0°-118°		120°		126°
Second Rest		minutes	52	minutes	70	minutes
Water, gallons	•	gallons		gallons		5 gallons
Temperature	140°-156° (145° a		160°-154° (158° a	1000	160°-150° (155°	
Third Rest	140 -150 (145 a	vorage)	100 -104 (100 8	vorage)	100 -100 (100	arviage)
Water, gallons						
Temperature						
Mashout Temperature		165°		165°		165°
Sparge Water, gallons	2.75	gallons	2.25	gallons	1.79	5 gallons
Boiling Time		minutes		minutes		minutes
Boiling Hops	Kent Golding pellets (6.6%)	1 02	Kent Golding pellets (6.6%)	0.5 oz	Kent Golding pellets (6.6%) (mash hops)	1 oz
Finishing Hops						
IBUs		34		18		24
Yeast	White Labs English Ale (WLP002) (22 oz starter)	1 vial	White Labs Edinburgh ScottishAle (WLP028) (22 oz starter)	1 vial	White Labs Edinburgh ScottishAle (WLP028) (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	
Original Gravity						
Maximum	1	1.105	1	1.070	1	1.115
Target	(75% extraction)	1.082		1.052		1.086
Measured	(1475 57660001)	1.086	, ,	1.062		1.092
Primary Gravity	1	1.029		1.028		1.042
Ending Gravity	1					
	I.	1.029		1.028		1.038
Extract Efficiency, %	I	82%		89%		80%
Apparent Attenuation		66%		55%		59%
BU/GU		0.40		0.29		0.26
Estipativitus-pops	wt%	vol%		vol%		vol%
Potential Alcohol, %	5.99%	7.48%		4.46%		7.09%
Lock Installed	11/22/2003		12/4/2003		12/19/2003	
Secondary Fermenter	11/23/2003		12/6/2003		12/21/2003	
Days in Primary	7		8		8	
Days in Secondary	13		15		13	
Primary Fermenter Temp	15	65°		65°		65°
Secondary Fermenter Temp		65°		65°		65°
Delmina Sugar	SS				8	
Priming Sugar, cups	Corn Sugar	1/3	Com Sugar	1/3	Corn Sugar	1/3
Water, cups		2		14		2
Number of Bottles				37		28
Comments						
Brewing	Hops added at 60 minul	les	4.5 hour brew session. Hop at 50 minutes	s added	Hops added during prote	in rest
Fermentation	Fermentation underway at 30) hours.	Fermentation underway at 1	7 hours.	Fermentation underway at	17 hours.
Beer			Diluted with 3/4 gallon of f water to produce OG 1.04 1.022. Second in Scottish 2004 AFC	19, FG		
Pourse of Dealer	<u> </u>					
Source of Recipe	Custom recipe.		Custom recipe.		Custom recipe.	

BEER STYLE	Chenin Blanc Hippocras	Helles Bock	Oktoberfest
	(Mead)	(All Grain)	(All Grain)
Brewing Date	1/1/2004 19		1/24/2004 3
Bottling Date		2/1/2004	2/15/2004
Primary Fermenter	3.0 gallon	3.0 gallons	3.0 gallons
Secondary Fermenter	2.8 gallon	2.8 gallons	2.8 gallons
Malt	See Mead Log	German Pilsner Malt 6 lbs Vienna Malt 3 lbs	German Pilsner Malt 2 lbs Munich Malt 5 lbs Vienna Malt 1 lb
Color, SRM Color, MCU Actual Color, SRM		4.25 4.25	
First Rest Water, gallons Temperature		40 minutes 3.38 gallons 124°-128°	
Second Rest		80 minutes	
Water, gallons		~1.8 gallons decoction	
Temperature		148°-156° (152° average)	~1.5 gallons decoclion 148°-158° (152° average)
Third Rest		10 minutes	
Water, gallons Temperature		~1.6 gallons decoction	
Mashout Temperature		165°	168°
Sparge Water, gallons		2.75 gallons	
Boiling Time		60 minutes	
Boiling Hops		Tettnanger pellets (5.6%) 0.8 oz	Tettnanger pellets (5.6%) 0.8 oz
Finishing Hops			
IBUs		23.7	24.2
Yeast		White Labs Oktoberfest 1 vlai (WLP820) (22 oz starter)	White Labs Oktoberfest 1 vial (WLP820) (22 oz starter)
Water/Treatment		All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss
Original Gravity Maximum Target Measured Primary Gravity Ending Gravity Extract Efficiency, % Apparent Attenuation		1.094 (80% extraction) 1.071 1.067 1.018 1.018 71% 73%	(80% extraction) 1.060 1.061 1.020 1.018 76% 70%
BU/GU		0.35	
Potential Alcohol, %		wt% vol%	INCIAL VICTARE
Lock Installed		5.14% 6.43%	
Secondary Fermenter		4/40/0004	1/29/2004
Days in Primary		1/18/2004	2/1/2004
Days in Secondary		14	8 14
Primary Fermenter Temp		60°-62°	
Secondary Fermenter Temp		58°-60°	56°-60°
Priming Sugar, cups		Corn Sugar 1/2	Corn Sugar 1/2
Water, cups		2	2
Number of Bottles		29	27
Comments			21
Brewing		Double decoction. Hops at 50 minutes.	Double decoction. Hops at 50 minutes.
Fermentation Beer		Fermentation underway at 21 hours. Diacetyl rest at beginning of secondary for two days.	Fermentation underway at 21 hours. Diacetyl rest at beginning of secondary for two days.
Source of Recipe		First in Bocks at 2004 AFCHBC	
Course of Lectibe		Custom recipe.	Custom recipe.

BEER STYLE	Schwarzbier	Dry Stout	Katie's Stout	
	(All Grain)	(All Grain)	(All Grain)	
Brewing Date	2/8/2004 4			
Bottling Date	3/7/2004	4/10/2004	5/9/2004	
Primary Fermenter	3.0 gallons	3.0 gallons	3.0 gallons	
Secondary Fermenter	2.8 gallons	2.8 gallons	2.8 gallons	
Malt	German Pilsner Malt 2 lbs	American Two-Row Malt 4 lbs	American Two-Row Malt 4 lbs	
l.	Munich Malt 5 lbs	Roasted Barley 1 lb	Roasted Barley 1 lb	
I	Chocolate Malt 8 oz	Crystal 60°L Malt 8 oz	Crystal 60°L Mait 8 oz	
		Chocolate Malt 8 oz	Chocolate Malt 8 oz	
		Flaked Oats 8 oz	ESPECIAL CONTRACTOR CO	
	1	Franced Oats 6 02	Flaked Oats 8 oz	
Color, SRM	23.1	41	41	
Color, MCU	60.7	142	100	
Actual Color, SRM	25.75%			
First Rest	30 minutes	15 minutes	15 minutes	
Water, gallons				
	2.8 gallons		1.63 gallons	
Temperature	126°-130°	126°	126*	
Second Rest	80 minutes			
Water, gallons	~1.5 gallons decoction	1.37 gallons	1.37 gallons	
Temperature	148"-158° (152° average)	148°-154° (152° average)	148°-154° (152° average)	
Third Rest	5 minutes		(102 Broluge)	
Water, gallons	~1.3 gallons decoction			
Temperature		l .		
	167°			
Mashout Temperature	167°	169°	169°	
Sparge Water, gallons	3.0 gallons		2.75 gallons	
Boiling Time	60 minutes	90 minutes	90 minutes	
Boiling Hops	Tettnanger pellets (5.6%) 0.75 oz	Challenger pellets (7.0%) 1 oz	Challenger pellets (7.0%) 1 oz	
		S. C.	Annual Scale Resemble Scales A	
Finishing Hops	Tettnanger pellets (5.6%) 0.25 oz			
IBUs	31	20.2		
Yeast	1200	38.3		
reast	White Labs Oktoberfest 1 vial (WLP820) (25 oz starter)	White Labs English Ale 1 vial (WLP002) (22 oz starter)	White Labs English Ale 1 vial (WLP002) (22 oz starter)	
Water/Treatment	All tap water	All tap water	All tap water	
	1 tsp Irish Moss	1 tsp Irish Moss	1 tsp Irish Moss	
Original Gravity				
Maximum	1.073	1.063	1.063	
Target	(80% extraction) 1.055			
Measured	1.059	(The state of the	[138737]	
Primary Gravity		1.056	0077477	
	1.021	1.015	0.0000	
Ending Gravity	1.020		1.015	
Extract Efficiency, %	81%	89%	89%	
Apparent Attenuation	66%	73%	73%	
BU/GU	0.53	0.68		
	wt% vol%	wt% vol%	wt% vol%	
Potential Alcohol, %	4.09% 5.12%	4.31% 5.38%	4.31% 5.38%	
Lock Installed	2/13/2004			
		3/26/2004	4/23/2004	
Secondary Fermenter	2/15/2004	3/28/2004	4/25/2004	
Days in Primary	7	7	7	
Days in Secondary	21	13	14	
Primary Fermenter Temp	56°-62°	62°	65°	
Secondary Fermenter Temp	56°-62°	62°	65*	
Priming Sugar, cups	Corn Sugar 1/2			
Water, cups				
Number of Bottles	2	2	2	
THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COL	28	28	28	
Comments				
Brewing	Double decoction. Boiling hops at 60 minutes, finishing hops at 10 minutes.	Hops added at 50 minutes	Hops added at 50 minutes	
Fermentation	Fermentation underway at 30 hours. Diacetyl rest at beginning of secondary for two days.	Fermentation underway at 30 hours.	Fermentation underway at 30 hours.	
Beer			Best of Show, QUAFF Oktoberfest 2004	
Source of Recipe	Custom recipe.	Custom recipe.	Custom recipe.	
		The state of the s	The second secon	

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BEER STYLE	American Amber Ale	Las Vegas Brown Porter	Bavarian Weizen	
	(All Grain)	(All Grain)	(All Grain)	
Brewing Date	5/1/2004 7	5/8/2004 8		
Bottling Date	5/22/2004	5/29/2004	6/25/2004	
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 Crystal 60°L Malt 8 oz	American Two-Row Malt 5 lbs Crystal 60°L Malt 1 lb Chocolate Malt 8 oz	Belgian Pilsner 2 lbs Red Wheat Malt 5 lbs	
Color, SRM Color, MCU	10.7 11.2	23.8 64	3 3	
Actual Color, SRM First Rest	15 minutes	0.554.5		
Water, gallons	1.5 gallons		■ [PI+00-2009 CM]	
Temperature	126°	126°	120	
Second Rest	45 minutes	45 minutes	73 minute	
Water, gallons	1.5 gallons	1.5 gallons		
Temperature	148°-154° (152° average)	148°-154° (152° average)	152°-156° (154° average	
Third Rest Water, gallons	1,	(122.23.28)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Temperature				
Mashout Temperature	169°	169°	169	
Sparge Water, gallons	2.5 gallons	2.5 gallons	2.5 gallon	
Boiling Time	60 minutes	60 minutes	60 minute	
Boiling Hops	Cascade pellets (6.9%) 0.75 oz	Kent Golding pellets (6.9%) 0.6 oz	Tettnanger pellets (5.0%) 0.5 oz	
Finishing Hops	Cascade pellets (6.9%) 0.75 oz			
	Cascade pellet dry hops 0.5 oz			
IBUs	35.7	35.7	40	
Yeast	White Labs California Ale 1 vial	White Labs English Ale 1 vial	White Labs Hefeweizen Ale 1 vial	
	(WLP001) (22 oz starter)	(WLP002) (22 oz starter)	(WLP300) (22 oz starter)	
Water/Treatment	All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss	All tap water 1 tsp Irish Moss	
Original Gravity		The state of the s	The state of the s	
Maximum	1.066	1.064	1.07	
Target	(75% extraction) 1.050	(75% extraction) 1.048		
Measured	1.054			
Primary Gravity	1.018	1.022		
Ending Gravity	1.018			
Extract Efficiency, %	82%	81%		
Apparent Attenuation	67%	58%		
BU/GU	0.66	0.69	0.2	
Detection At 1 1 2	wt% vol%	wt% vol%		
Potential Alcohol, %	3.78% 4.73%	3.15% 3.94%	5.25% 6.56	
Lock Installed	5/7/2004	5/12/2004	-	
Secondary Fermenter	5/8/2004	5/16/2004	6/5/2004	
Days in Primary Days in Secondary	7	8	7	
Primary Fermenter Temp	14 62°	13	20	
Secondary Fermenter Temp	62°	65°	65°-68	
Priming Sugar, cups	Corn Sugar 1/2	Corn Sugar 1/3	65°-68	
Water, cups Number of Bottles	2	Corn Sugar 1/3	Corn Sugar 5/8	
Comments	28	5 + keg		
Brewing	Boiling hops added at 50 minutes. Finishing hops added equally at 15, 5, and 2 minutes. Dry hops in secondary.	Hops added at 50 minutes.	Hops added at 50 minutes.	
Fermentation	Fermentation underway at 18 hours.	Fermentation underway at 18 hours.	Fermentation underway at 18 hours.	
Beer				
Source of Recipe	Custom recipe.			