

BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name:	A Right Scunner Scottish Ale		
Brew Date:	2013 February 17	Collected (gal):	9.95
Rack Date:	2013 March 16	Racked (gal):	9.85
Keg/Bottle Date:	2013 April 17	Kegeged/Bottled (gal):	9.75
Estimated		Actual	
ABV (%):	5.1%	ABV (%):	6.4%
OG (SG):	1.055	OG (SG):	1.062
FG (SG):	1.016	FG (SG):	1.013
IBU:	20.1	IBU:	20.7
SRM:	13.0	SRM:	14.8
IBU/Gravity Ratio:	0.37	IBU/Gravity Ratio:	0.33

Grain	Pounds	Potential	SG Share	Color	% Bill
Golden Promise Malt	17.25	1.038	0.042	3.0	75.41%
Home Toasted Golden Promise	2.30	1.038	0.006	30.0	10.06%
Caramel/Crystal 60L	2.00	1.034	0.004	60.0	8.74%
Belgian aromatic malt	0.70	1.036	0.002	26.0	3.06%
Peated malt	0.62	1.038	0.002	5.0	2.73%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Kent Golding	L	3.00	60	5.1%	20.1	100.00%

Design Notes	
Toast 1 lb Golden Promise for about an hour @ 350F.	
Boil 2 gal first runnings, reduce to 0.5 gal, add with 5 min left in boil.	
Ferment @ 58F for 4 weeks.	
Condition in secondary (keg) @ 68F for 3 weeks.	
Cold crash @ 32F for 3 days.	
Temp controlled fermentation: 4 weeks	

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	65
Total Grain Weight (lbs):	22.87
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	154
Strike Water (gal):	10.69
Strike Temperature (F):	171
Mash Ratio (qts/lb):	1.74
Grain Absorption (gal):	2.86
Mash Volume (gal):	11.77
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	7.69
First Runnings (gal):	7.79
First Runnings Gravity (Brix):	16.00
First Runnings Gravity (SG):	1.062

Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	7.22
Sparge Water Temperature (F):	175
Estimated Second Runnings (gal):	7.69
Second Runnings (gal):	7.79
Second Runnings Gravity (Brix):	6.00
Second Runnings Gravity (SG):	1.023
Estimated Preboil Volume (gal):	13.88
Estimated Preboil Gravity (Brix):	11.00
Preboil Volume (gal):	15.58
Preboil Gravity (Brix):	12.40
Preboil Gravity (SG):	1.048
Extraction Efficiency (%):	87%

Boil	
Boil Time (min):	90
Estimated Evaporation Loss (gal):	1.69
Hop Absorption (gal):	0.15
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.95
Actual Evaporation Loss (gal):	4.48
Original Gravity (Brix):	16.02
Batch Size Efficiency (%):	80%
Actual Efficiency (%):	72%

Fermentation	
Primary Fermentation (days):	28
Primary Fermentation Temperature (F):	58
Gravity After Primary Fermentation (SG):	1.018
Temperature of Reading (F):	61
Corrected SG:	1.017
Secondary Fermentation (days):	21
Secondary Fermentation Temperature (F):	68
Gravity After Secondary Fermentation (SG):	1.013
Temperature of Reading (F):	61
Corrected SG:	1.013
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.015
Temperature of Reading (F):	39
Corrected SG:	1.013
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	205
12 oz. Bottles Required:	99

Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	1.05
Priming Sugar (oz):	
DME (oz):	
Forced Carbonation (lbs):	

System Variables	
Brewhouse Efficiency (%):	70%
Volume in Hoses (gal):	0.22
Volume in Wort Chiller (gal):	0.19
Total Grain Weight (lbs):	22.87
Volume in HERMS Coil (gal):	0.25
Mash/Lauter Tun Deadspace (gal):	0.14
Strike to Sparge Volume Ratio (%):	50%
Trub Loss (gal):	0.16
FWH IBU Factor (%):	10%
Strike Temperature Factor (F):	7
Sparge Temperature Factor (F):	4
Estimated Evaporation Rate (gal/hr):	1.12
Leaf Hop Absorption Ratio (qts/oz):	0.20
Pellet Hop Absorption Ratio (qts/oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	-0.001

Required Amounts	
Call Count (billions):	420
Vials (White Labs/Wyeast):	6.9
Dry Yeast (g):	21.0
Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	2
Date Yeast Produced:	2012 December 19
Yeast Viability (%):	61%
Yeast Growth Rate:	3.46
Yeast Inoculation Rate (million/ml):	37.31
Starter Volume Required (ml):	3251
DME Required (oz):	10.57
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	319

User Variables	
----------------	--

Brewing Notes	
2/10: 3000mL started made.	
2/17: forgot to increase leaf hop absorption ratio.	
3/16: 1.018@60.6F (1.017: 5.9% ABV, 72% attenuation).	
Nice and malty but clean and light at the same time.	
Both batches identical.	
4/17: malty aroma; malty flavor but very dry and noticeable alcohol.	
A bit of something else that I can't place too; almost too bitter?	
Perhaps a bit of astringency?	
Can't tell if it has an infection or not, but if there is, it's not too concentrated at the moment.	
1.013 FG (6.5% ABV, 80% attenuation); seems high and indicative of an infection.	
Batch 2 is similar but perhaps more malty and like previous batches.	
No noticeable increase in bitterness or astringency.	
Anything off in this batch seems to be more aroma; although aftertaste is like batch 1.	
1.014 FG (6.3% ABV, 77% attenuation); seems high as well.	
4/21: now almost adequately carbonated and no noticeable "infection" at all.	
Nice and malty with a slight pepper note; good body; good bitterness.	

BJCP Style Guidelines	
Style:	Scottish Export 80L
Code:	9C
OG:	1.040-1.054
FG:	1.010-1.016
IBU:	15.0-30.0
SRM:	9.0-17.0
ABV:	3.9-5.0%
CO2:	0.8-1.3

Yeast Strain	
Yeast Strain:	Wyeast 1728 (Scottish Ale)
Type:	Scottish Ale
Attenuation (%):	69-73%
Actual Attenuation (%):	79%
Fermentation Temp (F):	55-75F
Flocculation:	high

Poundage	
Goal (lbs):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	
Amount (lbs oz.f.oz.):	

Hydrometer Correction	
SG:	1.063
Temperature (F):	65
Corrected SG:	1.062

Gravity Calculator		
Brix:	12.40	16.02
Specific Gravity:	1.048	1.062
Degrees Plato:	11.89	15.16

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Batch Scaling				
Desired OG:	1.055	Total Weight (lbs):	23.00	
Batch Size (gal):	11.00	Total Bill:	100.00%	
Brewhouse Efficiency (%):	70%			
Grain		Pounds	Potential	Color
Golden Promise Malt	17.25	1.038	3.0	75.00%
Home Toasted Golden Promise	2.30	1.038	30.0	10.00%
Caramel/Crystal 60L	2.07	1.034	60.0	9.00%
Belgian aromatic malt	0.69	1.036	26.0	3.00%
Peated malt	0.69	1.038	5.0	3.00%

Yeast	
Call Count (billions):	420
Vials (White Labs/Wyeast):	6.9
Dry Yeast (g):	21.0

Hydrometer Correction	
SG:	1.063
Temperature (F):	65
Corrected SG:	1.062

Gravity Calculator		
Brix:	12.40	16.02
Specific Gravity:	1.048	1.062
Degrees Plato:	11.89	15.16

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	