BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	For Peat's Sake Strong Scotch Ale		
Brew Date:	2015 February 15	Collected (gal):	10.75
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2015 March 3	Kegged/Bottled (gal):	10.00
Estimated		**Actual**	
ABV (%):	7.0%	ABV (%):	8.1%
OG (SG):	1.075	OG (SG):	1.074
FG (SG):	1.022	FG (SG):	1.012
IBU:	23.5	IBU:	24.3
SRM:	14.2	SRM:	14.5
IBU/Gravity Ratio:	0.31	IBU/Gravity Ratio:	0.33

Grain	Pounds	Potential	SG Share	Color	% Bill
Peated malt	27.00	1.038	0.065	5.0	87.10%
Home Toasted Peated Malt (Medium)	2.00	1.038	0.005	30.0	6.45%
Home Toasted Peated Malt (Dark)	2.00	1.038	0.005	50.0	6.45%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Challenger (UK)	P	2.50	90	7.0%	23.5	100.00%

Design Notes

Toast 2# grains at 350F for 1h15m and another 2# for 2h30m.
Mash at 122F for 20 min
Increase to 130F for 20 min
Increase to 142F for 20 min
Decoct (2 gal), boil 5 min, and return to increase temp to 155F for 60 min
Decoct (4 gal), boil 5 min, and return to increase temp to 174F for mashout
Sparge at 175F.

Batch Variables and Calculations	
Batch Size (gal):	11.00
Grain Temperature (F):	68
Total Grain Weight (lbs):	31.00
Mash	
Mash Time (min):	120
Desired Mash Temperature (F):	122
Strike Water (gal):	8.92
Strike Temperature (F):	138
Mash Ratio (qts/lb):	1.15
Grain Absorption (gal):	3.88
Mash Volume (gal):	11.40
Mash-out Temperature (F):	174
Estimated First Runnings (gal):	4.90
First Runnings (gal):	5.20
First Runnings Gravity (Brix):	24.00
First Runnings Gravity (SG):	1.093
Sparge	
Desired Sparge Temperature (F):	175
Sparge Water (gal):	8.64
Sparge Water Temperature (F):	180
Estimated Second Runnings (gal):	9.11
Second Runnings (gal):	8.05
Second Runnings Gravity (Brix):	11.10
Second Runnings Gravity (SG):	1.043
Estimated Preboil Volume (gal):	14.02
Estimated Preboil Gravity (Brix):	16.16
Preboil Volume (gal):	13.25
Preboil Gravity (Brix):	16.80
Preboil Gravity (SG):	1.065
Extraction Efficiency (%):	73%
Boil	
Boil Time (min):	90
Estimated Evaporation Loss (gal):	1.73
Hop Absorption (gal):	0.06
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	0.81
Actual Evaporation Loss (gal):	1.21
Original Gravity (Brix):	19.02
Batch Size Efficiency (%):	69%
Actual Efficiency (%):	67%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	60
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	3
Secondary Fermentation Temperature (F):	32
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	60
Tertiary Fermentation Temperature (F):	70
Final Gravity (SG):	1.014
Temperature of Reading (F):	37
Corrected SG:	1.012
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	242
12 oz. Bottles Required:	102
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	1.90
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
Volume in HERMS Coil (gal):	0.25
Mash/Lauter Tun Deadspace (gal):	0.14
Strike to Sparge Volume Ratio (%):	35%
Trub Loss (gal):	0.35
FWH IBU Factor (%):	10%
Strike Temperature Factor (F):	7
Sparge Temperature Factor (F):	4
Estimated Evaporation Rate (gal/hr):	1.15
Leaf Hop Absorption Ratio (qts/oz):	0.40
Pellet Hop Absorption Ratio (qts/ oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	-0.001

BJCP Style Guidelines	
Style:	Strong Scotch Ale
Code:	9E
OG:	1.070-1.130
FG:	1.018-1.056
IBU:	17.0-35.0
SRM:	14.0-25.0
ABV:	6.5-10.0%
CO2:	1.5-2.3

Yeast Strain	
Yeast Strain:	Wyeast 1728 (Scottish Ale)
Type:	Scottish Ale
Attenuation (%):	69-73%
Actual Attenuation (%):	83%
Fermentation Temp (F):	55-75F
Flocculation:	high

Required Amounts	
Cell Count (billions):	564
Vials (White Labs/Wyeast):	10.2
Dry Yeast (g):	28.3

Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	1
Date Yeast Produced:	2014 December 9
Yeast Viability (%):	55%
Yeast Growth Rate:	10.18
Yeast Innoculation Rate (million/ml):	3.53
Starter Volume Required (ml);	15680
DME Required (oz):	50.96
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	476

User Variables	

Batch Scaling				
Desired OG:	1.075	Total Weight (lbs):	31.02	
Batch Size (gal):	11.00	Total Bill:	100.00%	
Brewhouse Efficiency (%):	70%			
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Peated malt	27.14	1.038	5.0	87.50%
Home Toasted Peated Malt (Medium)	1.94	1.038	20.0	6.25%
Home Toasted Peated Malt (Dark)	1.94	1.038	30.0	6.25%

Poundage		
Goal (lbs):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
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Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Needed (lbs | oz.f_oz):		

Hydrometer Correction		
SG:	1.075	
Temperature (F):	61	
Corrected SG:	1.074	

Gravity Calculator			
Brix:	18.00	19.02	
Specific Gravity:	1.070	1.074	
Degrees Plato:	16.91	17.80	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

2/9: made a 3200mL starter (need 6400 mL total); plan to double it once half is done.
2/12: added 3500mL wort for a total of 6700mL starter.
2/13: cold crashed the starter.
2/14: toasted 2# grains at 350F for 1h15m and 2# at 350F for 2h15m and 425F for 15m (needed to put a pizza in the oven – the grains got dark once the temp was raised to 425F!)
Went with a lower mash ratio of 1.13 qts/lb instead of 1.39 qts/lb (35% instead of 50% first runnings collection of total collections).
Mash temp was 133F right away; no recirculation; mashed 40 min.
Decocted 2 gal, boiled for 5 min, returned to mash; temp increased to 145F; mashed for 30 min.
Decocted 4 gal, boiled for 5 min; returned to mash; temp increased to 154F; mashed for 60 min.
Started recirculating mash shortly thereafter; then increased temp to 174F for mashout.
Extended boil by 30 min to hit OG.
2/17: blowoff; cleaned and replaced airlocks.
2/18 another blowoff on one of the fermenters; cleaned airlock.
3/3: kegged; batch 1 is 1.012 FG (8.1% ABV); beautiful smoke and slight peat on the nose; nice malt undertones with bready notes; flavor is malty with strong smoke and peat, bready with hints of biscuit; finish is smoky and peppery, somewhat like a nice Islay Scotch!
Second batch is the same FG; aroma and flavor is the same; quite pleasant!