BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Lambic Batch 1		
Brew Date:	2015 November 23	Collected (gal):	16.00
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2016 September 18	Kegged/Bottled (gal):	16.00
Estimated		**Actual**	
ABV (%):		ABV (%):	5.6%
OG (SG):	1.053	OG (SG):	1.043
FG (SG):		FG (SG):	1.001
IBU:		IBU:	
SRM:	3.9	SRM:	3.8
IBU/Gravity Ratio:		IBU/Gravity Ratio:	

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	20.00	1.036	0.034	2.0	64.52%
Unmalted Raw White Wheat	11.00	1.037	0.019	2.0	35.48%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Debittered	P	10.00	240	0.0%	0.0	100.00%

Design Notes

Batch Variables and Calculations	
Batch Size (gal):	15.00
Grain Temperature (F):	60
Total Grain Weight (lbs):	31.00
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	113
Strike Water (gal):	13.81
Strike Temperature (F):	129
Mash Ratio (qts/lb):	1.78
Grain Absorption (gal):	3.88
Mash Volume (gal):	16.29
Mash-out Temperature (F):	170
Estimated First Runnings (gal):	9.79
First Runnings (gal):	10.72
First Runnings Gravity (Brix):	0.00
First Runnings Gravity (SG):	1.000
Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	9.32
Sparge Water Temperature (F):	175
Estimated Second Runnings (gal):	9.79
Second Runnings (gal):	10.73
Second Runnings Gravity (Brix):	0.00
Second Runnings Gravity (SG):	1.000
Estimated Preboil Volume (gal):	19.58
Estimated Preboil Gravity (Brix):	0.00
Preboil Volume (gal):	21.45
Preboil Gravity (Brix):	8.80
Preboil Gravity (SG):	1.034
Extraction Efficiency (%):	65%
Boil	
Boil Time (min):	150
Estimated Evaporation Loss (gal):	3.13
Hop Absorption (gal):	0.25
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.58
Actual Evaporation Loss (gal):	3.95
Original Gravity (Brix):	11.20
Batch Size Efficiency (%):	58%
Actual Efficiency (%):	62%
Fermentation	
Primary Fermentation (days):	
Primary Fermentation Temperature (F):	
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	
Secondary Fermentation Temperature (F):	
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	
Tertiary Fermentation Temperature (F):	
Final Gravity (SG):	1.000
Temperature of Reading (F):	76
Corrected SG:	1.001
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	138
12 oz. Bottles Required:	163
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	3.55
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 (%):	50%
Trub Loss (gal):	0.16
FWH IBU Factor (%):	10%
Strike Temperature Factor (F):	10
Sparge Temperature Factor (F):	5
Estimated Evaporation Rate (gal/hr):	**1.25**
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:	Fruit Lambic
Code:	17F
OG:	1.040-1.060
FG:	1.000-1.010
IBU:	2.0-10.0
SRM:	3.0-7.0
ABV:	5.0-7.0%
CO2:	2.6-4.5

Yeast Strain	
Yeast Strain:	White Labs WLP655 (Belgian Sour Mix)
Type:	Belgian Sour Mix
Attenuation (%):	
Actual Attenuation (%):	98%
Fermentation Temp (F):	
Flocculation:	

Required Amounts	
Cell Count (billions):	1,102
Vials (White Labs/Wyeast):	
Dry Yeast (g):	55.2
Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	
Date Yeast Produced:	
Yeast Viability (%):	
Yeast Growth Rate:	
Yeast Innoculation Rate (million/ml):	
Starter Volume Required (ml);	
DME Required (oz):	
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	

User Variables	

Batch Scaling				
Desired OG:		Total Weight (lbs):		
Batch Size (gal):		Total Bill:		
Brewhouse Efficiency (%):				
Grain	**Pounds**	**Potential**	**Color**	**% Bill**

Poundage		
Goal (lbs):	11.00	
Amount (lbs | oz.f_oz):	3	12.78
Amount (lbs | oz.f_oz):	3	7.38
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):	3	11.84

Hydrometer Correction		
SG:	1.044	
Temperature (F):	60	
Corrected SG:	1.043	

Gravity Calculator		
Brix:	10.98	11.20
Specific Gravity:	1.043	1.043
Degrees Plato:	10.58	10.78

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

See turbid mash notes in separate document.
Decided on a 120 min boil to increase vol (so long as OG was ~1.045); ended up begin 150 min due to collection time of barrel into carboys.

9/5/16: made priming sugar mixture (5.5 oz dextrose in ~1 cup water). Also premade yeast (~100mL water with Notty). See procedure for 2014 lambics.
Plan is to bottle three batches (15 gal) as geuze, keg 1 batch (5 gal) as geuze (to serve at ARToberfest), and rack 1 batch (5 gal) on top of 1 can of blackberry puree for a few months (then bottle).

9/18/16: collected 190 bottles (~17.8 gal), 5 gal in a keg, 5 gal over one can of blackberry puree, two 6 gal carboys (12 gal total), one 5 gal carboy, and one 3 gal carboy; this is a grand total of ~48 gal!
Average ABV is 5.7%, even considering what was left from the past two years.

1/6/17: kegged all but the 5 gal with blackberries; in total, I got 8.9 gal in bottles and 10 gal kegs; Ryan got 8.9 gal in bottles and 10 gal in kegs; I figure we share the 5 gal keg that went to ARToberfest; we'll also share the 5 gal on blackberries...later.