

BREW RECORD: Apple Pie (Oatmeal Cream Ale)

BN: 17002 **Brew Date:** 09/16/2017 **Brewer:** Jess & Dave
FV: S-1 **Batch Size:** 5.5 gallons
Mash Depth: 3.0 gallons 3.5 gal OG 13°F
Kettle Fill: 8 gallons 9 gal **Boil Length:** 75 minutes
9.25

Grain Bill

Grain	Amount (lbs)
2-Row (domestic)	7
Flaked Oats	1.5
Maris Otter	1
Caramunich I	1

Comments

Time Log

Step	Time
Mash-in	9:26
Vorlauf	10:06 - 10:36
Lauter	10:45
Sparge	10:46
→ Cut	10:57
Kettle Fill	11:00
Boil Start	11:30
✓ Hop 1	11:45
Hop 2	—
Whirlfloc	—
Servo	12:35
Hop 2	12:45
Boil End	12:45
WP Start	12:45
Rest Start	12:45
Rest End	1:05
KO Start	n/r
KO End	n/r

Hop Charge

Hop	Amount (oz)	When to Add
Magnum	0.5	60 min
Centennial	0.5	WP
Calypso	1	WP
Calypso	1.5	DH
Centennial	0.5	DH

Adjuncts

Adjunct	Amount	When to Add
Apple	2.5 lbs	4 - 5° P
Cinnamon (Sticks)	0.7 1.5 oz	4 - 5° P

Target Temp

Actual Temp

Strike	164	<u>164</u>
Mash	154	<u>150</u>
Sparge	172	<u>174</u>
Knockout (KO)	62	70 64
FV	62	<u>62°F</u>

Brix/pH

Value

First	16.4/5.6
Mid	12.2/5.7
Kettle Fill	8.0/5.8

Yeast

Source: Wyeast 2565 Kölsch lot # 0637206
Amt Pitched/Time: 400 mL / 1:45
Generation: pitch → G1
 7/25/17 mfg

Final Plato: 12.2/5.5

Final Vol: 2.0L

oxygenate for 30"

⊙

Hop Information				
Hop	Supplier	Lot Number	% α -acids	Comments
Magnum	Hoptimus Rex	HP26E	10.8	
Centennial	Hoptimus Rex	HP35	9.9	
Calypso	Hoptimus Rex	HP130	13.7%	

Adjunct Information			
Adjunct	Supplier	Lot Number	Comments

Efficiency Calculation

Theoretical: $4.76 \text{ kg malt} \times (0.81 \text{ kg sugar/kg malt}) = 3.86 \text{ kg extract}$

$$\text{Hopped wort: } \frac{7 \text{ gal}}{1} \cdot \frac{3.785 \text{ L}}{\text{gal}} \cdot \frac{1.049 \text{ kg}}{\text{L}} \cdot \frac{12.2 \text{ kg}}{100 \text{ kg}} = 3.39 \text{ kg}$$

$$\text{Efficiency} = (3.39 / 3.86) \times 100 = 87.8\%$$

$$\text{Sweet wort: } \frac{9 \text{ gal}}{1} \cdot \frac{3.785 \text{ L}}{\text{gal}} \cdot \frac{1.032 \text{ kg}}{\text{L}} \cdot \frac{8.0 \text{ kg}}{100 \text{ kg}} = 2.81 \text{ kg}$$

$$\text{Efficiency} = (2.8 / 3.86) \times 100 = 72.9\% \leftarrow$$

Comments/Observations

- mash temp slightly lower than desired (150°F vs 154°F target)
- worked to better moderate ~~mash~~ temp by passing $\sim 180^\circ\text{F}$ H_2O through HX w/ 60°F H_2O
strike
- No done w/ 60°F H_2O \rightarrow use ice next time!
- 7 gallons in boil kettle \rightarrow ~ 5.5 gallons in FV
 \hookrightarrow lose $\sim 1+$ gallons to bottom of ~~BT~~ brewkettle (low hop rate)
 \hookrightarrow lose $\sim 1/2$ gallon to hoses/HX

Yeast count: $\text{DF} = 100$

	Total
1	22
2	12
3	21
4	32
5	15
Σ	102

$$102 \times 100 \times 5 \times 10,000 = 5.1 \times 10^8 \text{ cells/mL}$$

$$5 \text{ gallons} = 18,925 \text{ mL}$$

$$\text{pitch rate} = 6 \times 10^6 \text{ cells/mL} \times 18,925 \text{ mL} = 1.14 \times 10^{11} \text{ cells}$$

$$\text{mh starter required} = \frac{1.14 \times 10^{11} \text{ cells}}{5.1 \times 10^8 \text{ cells/mL}} = 223 \text{ mL}$$

* pitched 400 mL of slurry

* forgot to add whirlfloc*