

Style: 20C. Imperial Stout

Brewer: BEER-N-BBQ by Larry

Brew Date: November 6, 2021

Brew System: Blichmann BrewEasy, 10 Gal, Electric, 75% Power, HiGrav

Fermenter: FK 35L Snubnose, Spike Flex+

Grain Bill, Adjuncts, & Sugars		
Type	Qty lb	% of Bill
Pale Malt: Brewers Malt, 2-row (Briess)	16.00	71.1%
Munich Malt: Dark Munich Malt (Avangard Malz)	2.50	11.1%
Caramel Malt: Caramel Malt 80L (Briess)	1.00	4.4%
Flaked Oats (Briess)	1.00	4.4%
Caramel Malt: Caramel Malt 120L (Briess)	1.00	4.4%
Chocolate Malt: Chocolate Malt (Briess)	0.75	3.3%
Roasted Malt: Midnight Wheat Malt (Briess)	0.25	1.1%

Recipe Outputs		BJCP Guide	
	Design	Actual	Min Max
Extract Eff.:	70.0%		
Brewhouse Eff.:	63.6%		
O.G.:	1.084	1.075	1.115
F.G.:	1.016	1.018	1.030
Ferm Vol:	25.0		
Batch Vol:	20.0		
App Atten:	81.0%		
IBUs:	33	50	90
ABV:	8.8%	8.0%	12.0%
SRM:	34.5	30.0	40.0
Calories per US Pint:	397		

Water Information		
Chicago (Lake Michigan)		
ppm (mg/L)	Orig.	Adj.
Calcium	37	108
Magnesium	12	17
Sodium	9	9
Chloride	16	120
Sulfate	25	76
Alkalinity	102	
Cl/SO ₄ Ratio	0.64	1.58

Brewing Process							
Total Water Req'd	43.9	qt @ 68 °F	44.9	qt @ 172 °F			
Mash Schedule & Water Infusions							
Step #	T1 °F	T2 °F	Time min	Infusion °F	qt	Actual °F	qt
1	75	156	75	175	19.7		
2	156	172	10				
3							
4							
5							

Hop Bill & Schedule					
Species	Type	Alpha (%)	Qty oz	AAU	Time (min)
Columbus	Pellet	16.2	0.75	12.2	60
Northern Brewer (U.S.)	Pellet	7.5	0.50	3.8	10
Columbus	Pellet	16.2	0.25	4.1	10



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Water Additions (grams)		
	Mash	Sparge
Gypsum	1.0	1.3
Cal Chloride	4.0	5.1
Epson Salt	1.0	1.3
Slaked Lime	0.0	0.0
Baking Soda	0.0	0.0
Chalk	0.0	0.0
Lactic Acid	0	mL

Yeast Information	
Fermentis	
SafAle US-05	
Ferm Temp:	64-82 °F

Forced Carbonation		
CO2 Volume	2.3	
Temperature	38.0	°F
Pressure	9.1	PSI

Other Ingredients/Additions	Amount	When
Whirlfloc tablets	1	15 min
yeast nutrient	.5 tsp	15 min
dry yeast (See yeast info for strain)	2 pkg	pitch
oak chips	2 oz	post-ferment
Bourbon	See notes	post-ferment

NOTES:

- Optionally, to avoid astringency, either add roasted grains late in mash or make a cold steeped tea in advance and add to boil.
- Ferment out (~10–14 days).
- While fermenting, soak oak chips in just enough bourbon to cover them for ~2 weeks or longer. Use air tight jar.
- Rack to another vessel, and add soaked chips and some (or all of) the bourbon for a couple of weeks or longer. Taste over time to ensure it doesn't become too oaky. Optionally, use a weighted sanitized mesh bag to sink the chips and keep tubing from clogging during transfer later. A bag also allows removal if flavor gets to become too strong. Or, if not using bag, rack again to get beer off oak if necessary.
- Keg. Use closed system transfer if possible to prolong shelf life since it may take to while to drink all of this.

Name		Design	Actual	Units	
Mash pH		5.5		✕	
No Sparge	Water	25.2		qt	
	Temp	172.0		°F	
	-	-		-	
	-	-		-	
	-	-		-	
Pre-Boil	Volume	35.1		qt	
	Temp	172.0		°F	
	Grain Abs Rate	0.38		qt/lb	
	Grains Only	Hydro.	1.066		Temp
		Corr SG			
		Refracto.	16.1		° Brix
	Grain + Sugar	Corr SG			✕
		Hydro.	1.066		Temp
		Corr SG			
		Refracto.	16.1		° Brix
	Corr SG			✕	
	Extract Efficiency (Grains Only)		70%		Hydro.
Boil					Refrac
	Starting Vol	35.6		qt	
	Time	90		min	
	End Vol	w/ IC	29.5		qt
		No IC	27.5		qt
Fermenter	Volume	25.0		qt	
	Temp	75.0		°F	
Original Gravity	Hydrometer	1.084		Temp	
		Corr SG			
	Refractometer	20.2		° Brix	
		Corr SG			✕
Final Gravity	Hydrometer	1.016		Temp	
		Corr SG			
	Refractometer	4.1		° Brix	
		Corr SG			✕
Packaged Beer		20.0		qt	