

Style: 13B. British Brown Ale

Brewer: Beer-N-BBQ by Larry
Brew Date: September 16, 2023Brew System: BrewEasy Compact, 65% PWR, Sparge Req'd
Chiller: JaDeD Scylla Fermenter(s): Spike Flex+

Grain Bill, Adjuncts, & Sugars		
Type	Qty lb	% of Bill
Pale Malt: Brewers Malt, 2-row (Briess)	8.25	78.6%
Caramel Malt: Caramel Malt 80L (Briess)	1.00	9.5%
Biscuit Malt: Victory® Malt (Briess)	1.00	9.5%
Chocolate Malt: Crisp Pale Chocolate Malt	0.25	2.4%

Recipe Outputs		BJCP Guide	
	Design	Actual	Min Max
Extract Eff.:	70.0%	82.0%	
Brewhouse Eff.:	65.4%	73.9%	
O.G.:	1.046	1.048	1.040 1.052
F.G.:	1.010		1.008 1.013
Ferm Vol:	22.0	24.0	
Batch Vol:	20.0		
App Atten:	79.0%		
IBUs:	23	21	20 30
ABV:	4.7%		4.2% 5.4%
SRM:	16.0	15	12 22
BU:GU Ratio:	0.50	0.44	
Calories per US Pint:		209	

Water Information		
Chicago (Lake Michigan)		
ppm (mg/L)	Orig.	Adj.
Calcium	37	115
Magnesium	12	12
Sodium	9	9
Chloride	16	100
Sulfate	25	100
Alkalinity	102	
Cl/SO ₄ Ratio	0.64	1.00

Water Additions (grams)		
	Mash	Sparge
Gypsum	2.0	2.0
Cal Chloride	2.6	2.6
Epson Salt	0.0	0.0
Slaked Lime	0.0	0.0
Baking Soda	0.0	0.0
Chalk	0.0	0.0
Lactic Acid	2	mL

Yeast Information		
Fermentis		
SafAle S-04		
Ferm Temp:	59-68	°F

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

Hop Bill & Schedule					
Species	Type	Alpha (%)	Qty oz	AAU	Time (min)
Fuggle (U.K.)	Pellet	5.6	1.00	5.6	60
Fuggle (U.K.)	Pellet	3.9	0.50	2.0	15
Fuggle (U.K.)	Pellet	3.9	0.50	2.0	1



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Other Ingredients/Additions	Amount	When
Whirlfloc tablets	1	15 min

NOTES:

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- Fermentation: Ferment ~2 weeks at ~68 deg F.
- Cold crash to 36 F for 2+ days.
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- Rack via closed transfer and chill.
- Carbonate then pour off sediment.
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- Brew Day note:

Total Water Required									
Design	31.0	qt	70.0	°F	Actual	31.0	qt	70.0	°F
Mash Schedule & Water Infusions									
Step #	Schedule		Strike Water (Preheated Tun)				Mash	Mash pH	
	Temp	Time	Design		Actual		Actual	Design	Actual
	°F	min	qt	°F	qt	°F	°F		
1	154	60	15.8	165	24.0	165.0	154.0	5.4	5.2
2									
3									
4									
5									
Lautering Process (Wort Separation)									
			Design		Actual		Corrected		
			qt	°F	qt	°F	qt	°F	
Fly Sparge	Sparge Water Req'd		15.8	154.0	8.0	154.0	8.0	154.0	
	-		-	-					
	-		-	-					
	Time Req (min) @ 0.75qt/min		42.1	-					
	Wort Collected		26.1	154.0	27.0	150.0	27.0	154.0	
Grains Only Contribution	Grain Absorb Rate		0.40	qt/lb	0.35	qt/lb			
	S.G.	Hydrometer	1.041		1.045	77.0	°F	1.047	
		Refractometer	10.3	° Brix		° Brix			
	Mash Extract Efficiency		70%		82.0%		Hydrometer		
							Refractometer		
Boil Process									
			Design		Actual		Corrected		
			qt	°F	qt	°F	qt	°F	
Boil	Start Volume		26.7	qt	29.0	qt			
	Time		60	min	60	min			
	End Volume (w/ IC)		25.5	qt	27.0	qt			
	Boil off Rate		3.2	qt/hr	2.0	qt/hr			
Post Boil	Chilled Volume		22.6	qt	25.5	qt	25.5	qt	
			75	°F	77.0	°F	75	°F	
O.G.	Hydrometer		1.046		1.046	74.7	°F	1.048	
	Refractometer		11.5			° Brix			
Fermentation & Clarification									
			Design		Actual		Corrected		
			qt	°F	qt	°F	qt	°F	
Into Fermenter			22.0	75.0	24.0	75.0			
Into Bright Tank or Aging Vessel									
F.G.	Hydrometer		1.010				°F		
	Refractometer		2.5	° Brix		° Brix			
Packaged Beer			20.0	qt		qt			