

Style: 18B. American Pale Ale

Brewer: Beer-N-BBQ by Larry
Brew Date: March 13, 2022

Brew System: 20 Gal Spike Kettle, 72 qt Cooler Tun, Propane, Pump
Chiller: JaDeD Scylla Fermenter(s): Kegmenter

Grain Bill, Adjuncts, & Sugars		
Type	Qty lb	% of Bill
Pale Malt: Brewers Malt, 2-row (Briess)	18.00	78.3%
Vienna Malt: Goldpils® Vienna Malt (Briess)	4.00	17.4%
Caramel Malt: Caramel Malt 40L (Briess)	1.00	4.3%

Recipe Outputs		BJCP Guide	
Design	Actual	Min	Max
Extract Eff.:	72.0%	69.6%	
Brewhouse Eff.:	62.5%	#VALUE!	
O.G.:	1.051	1.048	1.045 1.060
F.G.:	1.010	1.007	1.010 1.015
Ferm Vol:	42.0		
Batch Vol:	40.0	38.0	
App Atten:	81.0%	86.2%	
IBUs:	36	36	30 50
ABV:	5.4%	5.4%	4.5% 6.2%
SRM:	6	6	5 10
Calories per US Pint:	233		

Water Information		
Chicago (Lake Michigan)		
ppm (mg/L)	Orig.	Adj.
Calcium	37	93
Magnesium	12	18
Sodium	9	9
Chloride	16	90
Sulfate	25	83
Alkalinity	102	
Cl/SO ₄ Ratio	0.64	1.08

Total Water Required										
Design	66.2	qt	54.0	°F	Actual	66.2	qt	54.0	°F	
Mash Schedule & Water Infusions										
Step #	Schedule		Strike Water (Preheated Tun)				Mash		Mash pH	
	Temp °F	Time min	Design qt	°F	Actual qt	°F	°F	Design	Actual	
1	150	60	34.6	163	50.0	160.0	151.0	5.5	5.65	
2										
3										
4										
5										

Hop Bill & Schedule					
Species	Type	Alpha (%)	Qty oz	AAU	Time (min)
Idaho 7 (U.S.)	Pellet	12.4	1.00	12.4	FWH
Idaho 7 (U.S.)	Pellet	12.4	1.00	12.4	10
Idaho 7 (U.S.)	Pellet	12.4	2.00	24.8	Hop Stand (15)



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Water Additions (grams)		
	Mash	Sparge
Gypsum	2.0	1.9
Cal Chloride	5.0	4.8
Epson Salt	2.0	1.9
Slaked Lime	0.0	0.0
Baking Soda	0.0	0.0
Chalk	0.0	0.0
Lactic Acid	4	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

Lautering Process (Wort Separation)							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
No Sparge	Sparge Water Req'd	33.0	150.0	16.0	150.0	16.0	150.0
	-	-	-				
	-	-	-				
	-	-	-				
	Wort Collected	52.7	150.0	53.6	140.0	53.8	150.0
Grains Only Contribution	Grain Absorb Rate	0.50	qt/lb	0.38	qt/lb		
	S.G. Hydrometer	1.047		1.045	68.0	°F	1.045
	Refractometer	11.6	° Brix		° Brix		
	Mash Extract Efficiency	72%		69.6%		Hydrometer	
						Refractometer	

Boil Process							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
Boil	Start Volume	53.8	qt	55.0	qt		
	Time	60	min	65	min		
	End Volume (w/ IC)	50.8	qt	51.0	qt		
	Boil off Rate	5.0	qt/hr	3.7	qt/hr		
Post Boil	Chilled Volume	47.1	qt	50.4	qt	50.4	qt
		75	°F	74.0	°F	75	°F
O.G.	Hydrometer	1.051		1.048	68.0	°F	1.048
	Refractometer	12.5			° Brix		

Fermentation & Clarification							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
	Into Fermenter	42.0	75.0				
	Into Bright Tank or Aging Vessel						
F.G.	Hydrometer	1.010		1.007	68.0	°F	1.007
	Refractometer	2.5	° Brix		° Brix		
	Packaged Beer	40.0	qt	38.0	qt		

NOTES:
 • Hop Stand: Reduce wort temperature to 175 F while steeping post boil.
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