

Style: 6A. Märzen

Brewer: Beer-N-BBQ by Larry  
 Brew Date: August 20, 2022

Brew System: 20 Gal Spike Kettle, Solo Basket, Gas, Pump  
 Chiller: JaDeD Scylla Fermenter(s): FK 35L Snubnose, Spike Flex+

Grain Bill, Adjuncts, & Sugars		
Type	Qty lb	% of Bill
Pale Malt: Brewers Malt, 2-row (Briess)	10.00	38.5%
Munich Malt: Dark Munich Malt (Avangard Malz)	10.00	38.5%
Vienna Malt: Vienna Malt (Avangard Malz Premium)	6.00	23.1%

Recipe Outputs			BJCP Guide	
	Design	Actual	Min	Max
Extract Eff.:	75.0%	68.1%		
Brewhouse Eff.:	65.0%	#VALUE!		
O.G.:	1.056	1.052	1.054	1.060
F.G.:	1.015		1.010	1.014
Ferm Vol:	45.0			
Batch Vol:	40.0			
App Atten:	73.0%			
IBUs:	21	#VALUE!	18	24
ABV:	5.3%		5.8%	6.3%
SRM:	10	#VALUE!	8	17
Calories per US Pint:		260		

Water Information		
Chicago (Lake Michigan)		
ppm (mg/L)	Orig.	Adj.
Calcium	37	46
Magnesium	12	12
Sodium	9	9
Chloride	16	32
Sulfate	25	25
Alkalinity	102	
Cl/SO <sub>4</sub> Ratio	0.64	1.26

Total Water Required										
Design	64.5	qt	68.0	°F	Actual	64.5	qt	68.0	°F	
Mash Schedule & Water Infusions										
Step #	Schedule		Strike Water (Preheated Tun)				Mash		Mash pH	
	Temp °F	Time min	Design qt	°F	Actual qt	°F	Actual °F	Design	Actual	
1	153	90	65.8	160	65.8	160.0	154.0	5.5		
2										
3										
4										
5										

Hop Bill & Schedule					
Species	Type	Alpha (%)	Qty oz	AAU	Time (min)
Magnum (U.S.)	Pellet	12.0	1.00	12.0	60
Tettnanger (German)	Pellet	3.9	1.00	3.9	15
Tettnanger (German)	Pellet	3.9	1.00	3.9	5



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Water Additions (grams)		
	Mash	Sparge
Gypsum	0.0	0.0
Cal Chloride	2.0	0.0
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	5	mL

Yeast Information	
Omega Yeast	
German Bock	
Ferm Temp:	48-55 °F

Forced Carbonation		
CO2 Volume	2.5	
Temperature	38.0	°F
Pressure	11.2	PSI

Lautering Process (Wort Separation)							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
No Sparge	Sparge Water Req'd	0.0	153.0				153.0
	-	-	-				
	-	-	-				
	-	-	-				
	-	-	-				
Grains Only Contribution	Wort Collected	55.3	153.0	55.0	189.0	54.3	153.0
	Grain Absorb Rate	0.35	qt/lb	0.39	qt/lb		
	S.G. Hydrometer	1.053		1.048	0.0	°F	1.048
	Refractometer	13.0	° Brix		° Brix		
Mash Extract Efficiency	75%		68.1%		Hydrometer		
					Refractometer		

Boil Process							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
Boil	Start Volume	56.4	qt				
	Time	60	min				
	End Volume (w/ IC)	53.9	qt				
	Boil off Rate	4.5	qt/hr				
Post Boil	Chilled Volume	50.0	qt	49.5	qt	49.5	qt
		75	°F	79.0	°F	75	°F
O.G.	Hydrometer	1.056		1.052	68.0	°F	1.052
	Refractometer	13.8			° Brix		

Fermentation & Clarification							
		Design		Actual		Corrected	
		qt	°F	qt	°F	qt	°F
	Into Fermenter	45.0	75.0				
	Into Bright Tank or Aging Vessel						
F.G.	Hydrometer	1.015				°F	
	Refractometer	3.9	° Brix		° Brix		
	Packaged Beer	40.0	qt		qt		

NOTES:

- Pressure ferment ~2 weeks under 15 psi pressure at room temperature (~70 deg F).
- Cold crash.
- Gelatin fine: Rate 1g gelatin per gallon of beer: Dissolve in 2 oz boiled but cooled dechlorinated water per gram gelatin. Stir. Heat to 160 deg F. Add to kegs and agitate. Purge headspace with CO2.
- Rack to keg(s) via closed transfer if possible and chill.
- Carbonate then pour off sediment.
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