League Zeitgeister (AG)

Kölsch (6 C)

Type: All Grain
Batch Size: 23.00 L
Boil Size: 28.50 L
Boil Time: 60 min
Final Bottling Vol: 22.00 L
Fermentation: League Ale Kit

Date: 12 Jul 2019
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
This recipe is fermented a little cooler than most ales and will benefit from lagering for at least 2 weeks if kegged or after bottle conditioning is complete. It will continue to improve if stored cool.

1. If flavour minerals are available, add to boil only as mash pH is taken care of with acid malt.
2. The mash temp is 65C and the duration is 75 min to assist attenuation.
3. If available, treat only the sparge water with 1.8 ml of 88% lactic acid to adjust the pH below 5.8. This should be correct for most municipal water supplies.
4. Pitch at 15C and maintain 15C - 16C until fermentation is nearing completion.
5. Once fermentation slows (~7 - 10 days), raise temp to 21C for a diacytle rest. Maintain 20C - 22C until fermentation is complete.
6. After fermentation is complete, cold crash to 2C and let lager for a week before packaging.
7. Carbonate to 2.5 volumes of CO2.
8. Lager an additional 2 weeks at 2C before serving.

Water Prep

Amt	Name	Type	#	%/IBU	Volume
4.40 g	Calcium Chloride (Mash)	Water Agent	1	-	-
4.00 g	Gypsum (Calcium Sulfate) (Mash)	Water Agent	2	-	-

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
3.900 kg	BEST Pilsen Malt (BESTMALZ) (3.5 EBC)	Grain	3	81.3 %	2.54 L
0.575 kg	BEST Munich (BESTMALZ) (15.0 EBC)	Grain	4	12.0 %	0.37 L
0.325 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	5	6.8 %	0.21 L
1.80 ml	Lactic Acid (Sparge)	Water Agent	6	-	-

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 16.46 L of water at 70.0 C	65.0 C	75 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

Fly sparge with 16.85 L water at 77.0 C
Add water to achieve boil volume of 28.50 L
Estimated pre-boil gravity is 1.042 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
50.00 g	Hallertauer [4.80 %] - Boil 60.0 min	Hop	7	26.8 IBUs	-

Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.047 SG

Cool and Transfer Wort

Cool wort to fermentation temperature
Transfer wort to fermenter
Add water if needed to achieve final volume of 23.00 L

Pitch Yeast and Measure Gravity and Volume

Fermentation Ingredients

Amt	Name	Type	#	%/IBU	Volume
2.0 pkg	LalBrew Köln Kölsch Style Ale Yeast (Lallemand #)	Yeast	8	-	-

Measure Actual Original Gravity _____ (Target: 1.047 SG)
Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

12 Jul 2019 - Primary Fermentation (10.00 days at 16.0 C ending at 16.0 C)
22 Jul 2019 - Secondary Fermentation (1.00 days at 16.0 C ending at 22.0 C)
23 Jul 2019 - Tertiary Fermentation (7.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

Measure Final Gravity: _____ (Estimate: 1.009 SG)
Date Bottled/Kegged: - Carbonation: Keg with 14.89 PSI