

Crafting Your Kölsch Style Ale

Club BABBLE - 26JUN08
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BJCP Statistics

OG: 1.044 – 1.050

FG: 1.007 – 1.011

ABV: 4.4 – 5.2%

IBUs: 20 – 30

SRM: 3.5 – 5

Kölsch is a light well attenuated ale. Ray Daniels' in his analysis of award winning kölsch found the average starting gravity to be 1.047. Apparent attenuation was 80-85%.

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Ingredients - Malts for Your Kölsch

- Pilsner or domestic 2-row should make up 80-100% of the grain bill. Many authentic kölschs are 100% pilsner malt.
- Optional - up to 20% wheat malt. This is very common among homebrewers, but less common among the German commercial producers.
- Up to 5% of light crystal, such as carapils maybe added.
- Munich or Melanoidin malt sometimes added to add complexity normally associated with decoction mashes. Keep to less than 3% of the grain bill. Since this is a light delicate style, I would not recommend this addition.
- Assuming 80% efficiency use ~1.5 lbs grain per gallon of finished beer.
- For malt extract, use the lightest extract available with a high degree of fermentability.
- For extract, use ~1.4 lbs syrup or 1.1 lbs dry extract per gallon of beer.

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Ingredients - Hops for Your Kölsch

Recommended Hops: Bittering: Hallertauer, Perle, Tettnanger, and Spalt
 Flavor: Tettnanger, Hersbrucker, and Hallertauer
 Aroma: Hallertauer and Tettnanger
 Dry Hop: n/a

Recommended Bitterness Ratio (BU:GU) 0.5-0.6
 (I typically use 0.58, which give ~27 IBUs for a 1.047 beer).

	Bittering		Flavor		Aroma		Dry
Option	% IBUs	minutes	% IBUs	minutes	% IBUs	minutes	oz/gal
1	85 - 91	60+	9 - 15	10- 20	n/a	n/a	n/a
	88	75	12	15	---	---	---
2	51 - 88	45+	9 - 42	15 - 20	3 - 7	5	n/a
	73	60	22	17	5	5	---
3	100	40 +	n/a	n/a	n/a	n/a	n/a
	100	65	---	---	---	---	---

Note, options 1 and 3 best fit the BJCP Guidelines. Option 2 more along the lines of Mühlen-Kölsch and Paffgen.

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Ingredients - Yeast for Your Kölsch

- White Labs WLP029 German Ale / Kölsch
- Wyeast #1007 German Ale (I've used this yeast with good success)
- Wyeast #2565 Kölsch Yeast
- Wyeast #2575 Kölsch II (new VSS)
- Fermentis K-97 dry yeast (reportedly used with success by Alan McKay of Bodensatz).
- Lager yeast used at elevated temperatures.

Recommended primary fermentation temperature is 55-63 F. Normally, I target 59 F.

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Ingredients - Water for Your Kölsch

Koln Water	ppm
Ca	104
Cl	109
Mg	15
Na	52
SO ₄	86
CO ₃	152

Salt additions assuming Lake Michigan as base water

- Chalk (CaCO₃) 0.11g per gallon
- Epsom (MgSO₄) 0.07g per gallon
- Gypsum (CaSO₄) 0.43g per gallon
- Table Salt (NaCl) 0.45g per gallon
- Calcium Chloride 0.21g per gallon

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Process - Mash for Your Kölsch

- Use as thin of mash as possible to reduce the amount of sparge water required. 4:1 or 1.9 qt/lb is common among German commercial brewers
- Decoction mash is not recommended with modern well modified malts.

STEP MASH PROFILE

Protein Rest	122 F for 20 min (Optional)
Beta Rest	143- 149 F for 30-60 min.
Alpha Rest	159 F for 10-15 min.
Mash Out	170-173 F for 10 min.

ALTERNATE SINGLE INFUSION

Saccharification Rest 145-149 F for 60 min.

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Process - Boiling, Chilling, Fermenting, Conditioning, and Serving Your Kölsch

- Boil for 90 minutes. Add hops per the hopping schedule. Use boil finings (Irish moss) to increase hot break.
- Quickly chill your wort, leaving as much cold and hot break behind as possible.
- Pitch 0.5-1.0 fl-oz (15-30 ml) of yeast slurry per gallon of wort. For 5 gallons this works out to 1/3-2/3 cups of slurry. Note, it is recommended that you do not pitch your yeast below 59 F, as this may lead to sluggish start to fermentation.
- Recommended fermentation temperature is 55-63 F. Higher temperatures will produce more esters. Primary fermentation typically last 6-7 days.
- Lager for 2 to 5 weeks at 30-34 F.
- Target carbonation 2.2-2.4 volumes of CO₂
- Serve at 41-47 F in a tall slender glass called a Stange.

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Sample Recipe

Froggy III Kolsch (5.7 gallons, 1.043 OG, 1.006 FG, 86% AA, 24.1 IBU, 0.56 BU:GU)

Malts / Fermentables:	Amount:	Points:	Lov:	%:
Belgian Carapils	0.50 lb	1.030	7.9	6.3
Belgian Wheat	1.50 lb	1.038	1.8	18.8
Moravian Pilsner	6.00 lb	1.038	1.6	75.0

Hops:	Amount:	Type:	Alpha:	Add:	Minutes:	IBU	%IBU
Spalt Select	1.40 oz	Leaf	3.6	Boil	75	20.7	85.9
Santiam (home grown)	0.30 oz	Leaf	6	Boil	15	3.4	14.1

Rest Temp: End Temp: Method: Time: Directions:

64.0 F 64.0 infusion 10 Mash in with 3.4 quart US of water at 61.3 F

122.0 F 120.0 infusion 10 Add 3.2 quart US of water at 211.0 F

149.0 F 142.0 infusion 30 Add 3.8 quart US of water at 211.0 F

162.0 F 160.0 infusion 15 Add 4.8 quart US of water at 211.0 F

172.0 F 172.0 direct 30 Add direct heat until mash reaches 172.0 F.

170.0 F 170.0 sparge 20.3 quart US

Yeast: White Labs German Ale/Kölsch WLP029