

# Kolsch

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **21**
- SRM **3.7**
- Style **Kölsch**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **28.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.8 liter(s)**
- Total mash volume **30.6 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **23.8 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **34.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Płatki owsiane	0.4 kg (5.9%)	85 %	3
Grain	Pilsner (2 Row) Bel	2.5 kg (36.8%)	79 %	4
Grain	Rice, Flaked	0.5 kg (7.4%)	70 %	2
Grain	Pale Malt (2 Row) Bel	1 kg (14.7%)	80 %	6
Grain	Barley, Raw	2 kg (29.4%)	60.9 %	4
Grain	Barley, Flaked	0.4 kg (5.9%)	70 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	15 g	60 min	7 %
Boil	Saaz (Czech Republic)	20 g	60 min	4.16 %
Aroma (end of boil)	Tradition	15 g	5 min	7 %
Aroma (end of boil)	Saaz (Czech Republic)	20 g	5 min	4.16 %
Whirlpool	Saaz (Czech Republic)	20 g	15 min	5.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
safe ale s33	Ale	Slant	150 ml	---

## Notes

- dodano enzymy do zacieru alfa i beta,  
fermentacja w 15 stopniach  
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