

## Kölsch 3.1

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **20**
- SRM **4**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **42 liter(s)**
- Trub loss **3 %**
- Size with trub loss **43.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **3 %/h**
- Boil size **46.2 liter(s)**

### Mash information

- Mash efficiency **73 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **35 liter(s)**
- Total mash volume **45 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **35 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **21.2 liter(s)** of **76C** water or to achieve **46.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Mep©Ale	3.75 kg (37.5%)	80 %	6
Grain	Pszeniczny Mep©Wheat	2.5 kg (25%)	85 %	5
Grain	Lager Malteurop	3.75 kg (37.5%)	81 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	7.2 %
Aroma (end of boil)	Lublin (Lubelski)	40 g	10 min	4 %
Boil	Marynka	10 g	60 min	8.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	23 g	Fermentis