

#3 Kölsh

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **27**
- SRM **3.2**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **16.4 liter(s)**

Steps

- Temp **43 C**, Time **30 min**
- Temp **66 C**, Time **30 min**
- Temp **70 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **46.8C**
- Add grains
- Keep mash **30 min** at **43C**
- Keep mash **30 min** at **66C**
- Keep mash **15 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.7 kg (90.2%)	81 %	4
Grain	Pszeniczny	0.4 kg (9.8%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.5 %
Boil	Tradition	30 g	10 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Fermentis