

## KOELSH #4

---

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **26**
- SRM **3.4**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **73 C**, Time **20 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **73C**
- Sparge using **19.8 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (100%)	82 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	35 g	60 min	7.5 %
Aroma (end of boil)	Hallertau Spalt Select	100 g	0 min	4.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
LalBrew Köln	Ale	Slant	200 ml	Lallemand