

## W21 Finest Kölsch

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **23**
- SRM **3.4**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **2 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.1 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.2 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **28.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4.5 kg (91.8%)	82 %	4
Grain	Viking Wheat Malt	0.4 kg (8.2%)	83 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	30 g	60 min	5 %
Boil	Hallertau Tradition	30 g	15 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
gozdawa old german altbier 9	Ale	Dry	10 g	White Labs

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	0 g	Mash	---
Water Agent	kwaz fosforowy	3.13 g	Mash	---