

## 40# kolsch

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **4.3**
- 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 **5 %/h**
- Boil size **23.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **11.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.8 kg (73.7%)	81 %	4
Grain	Pszeniczny	0.75 kg (19.7%)	85 %	4
Grain	Weyermann - Carapils	0.15 kg (3.9%)	78 %	4
Grain	Słód Caramunich Typ II Weyermann	0.1 kg (2.6%)	73 %	120

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	5 g	60 min	9 %
Boil	lunga	5 g	45 min	9 %
Boil	Tradition	15 g	30 min	5.5 %
Boil	Tradition	15 g	15 min	5.5 %

### Yeasts

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