

4. Kolsch

- Gravity **11.9 BLG**
- ABV ---
- IBU **31**
- SRM **4.5**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (76.1%)	81 %	4
Grain	Pszeniczny	0.5 kg (10.9%)	85 %	4
Grain	Monachijski	0.3 kg (6.5%)	80 %	16
Grain	Strzegom Wiedeński	0.3 kg (6.5%)	79 %	10

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.4 %
Boil	Tradition	30 g	30 min	5.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M10 Workhorse	Ale	Dry	10 g	Mangrove Jack's

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	10 min