

# Kölsch & Tea

- Gravity **10.5 BLG**
- ABV ---
- IBU **22**
- SRM **3.2**
- Style **Kölsch**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **11.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **63C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **23.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (78.9%)	81 %	4
Grain	Pszeniczny	0.6 kg (15.8%)	85 %	4
Grain	Caramel Pils	0.2 kg (5.3%)	75 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	13.5 %
Aroma (end of boil)	Hersbrucker	25 g	15 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
CALIFORNIAN LAGER M54 Mangrove Jack's	Lager	Dry	10 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
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Flavor	Earl Gray	100 g	Secondary	2 day(s)
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