

# Mahlzeit

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **20**
- SRM **3.4**
- Style **Kölsch**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (83.3%)	80 %	4
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	85 g	60 min	2.5 %
Boil	Lublin (Lubelski)	15 g	15 min	2.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand LalBrew Köln Koelsch	Lager	Dry	11 g	Lallemand