

# Lager

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **35**
- SRM **3.6**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

## Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (100%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	9 g	90 min	11 %
Boil	Magnum	18 g	40 min	11 %
Boil	Tettnang	24 g	20 min	3.2 %
Dry Hop	Tettnang	25 g	4 day(s)	3.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
W-34/20	Lager	Dry	11.5 g	Fermentis