

# Pale Lager

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **44**
- SRM **3.5**
- Style **Bohemian Pilsener**

## 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 **7 %/h**
- Boil size **24.6 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (100%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	20 g	40 min	11 %
Boil	Saaz (Czech Republic)	20 g	40 min	4.5 %
Boil	Saaz (Czech Republic)	40 g	20 min	4.5 %
Boil	Saaz (Czech Republic)	40 g	0 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
w-34/70-gęstwa	Lager	Slant	150 ml	---