

# pils

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU ---
- SRM **3.4**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **500 liter(s)**
- Trub loss **5 %**
- Size with trub loss **525 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **632.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **333 liter(s)**
- Total mash volume **444 liter(s)**

## Steps

- Temp **50 C**, Time **30 min**
- Temp **64 C**, Time **30 min**
- Temp **70 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **333 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **5 min** at **76C**
- Sparge using **410.5 liter(s)** of **76C** water or to achieve **632.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	105 kg (94.6%)	81 %	4
Grain	Cara-Pils/Dextrine	5 kg (4.5%)	72 %	4
Grain	Monachijski	1 kg (0.9%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Hallertau Mittelfruh	1250 g	30 min	3 %
Mash	Hallertau Mittelfruh	375 g	75 min	3 %
Mash	Hallertau Mittelfruh	625 g	85 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
w34/70	Lager	Dry	500 g	---