

# German Pils

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **39**
- SRM **3.4**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **70 min**
- Evaporation rate **11 %/h**
- Boil size **13 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5.35 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **14.3 liter(s)**

## Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **1 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **67C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **3.3 liter(s)** of **76C** water or to achieve **13 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.05 kg (91.1%)	82 %	4
Grain	Weyermann Carapils	0.2 kg (8.9%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga Polish Hops	10 g	60 min	10 %
Boil	Tradition	15 g	20 min	5.4 %
Aroma (end of boil)	Tradition	10 g	10 min	5.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	1200 ml	Fermentum Mobile