

# German Pils

---

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **46**
- SRM **3.4**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (100%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Tradition	20 g	50 min	5.2 %
Boil	Hallertauer Tradition	20 g	40 min	5.2 %
Boil	Hallertauer Tradition	15 g	30 min	5.2 %
Boil	Hallertauer Tradition	20 g	20 min	5.2 %
Boil	Tettnanger	20 g	10 min	3.8 %
Boil	Tettnanger	30 g	5 min	3.8 %
Whirlpool	Tettnanger	30 g	20 min	3.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
2007 Pilsen Lager	Lager	Liquid	2000 ml	Wyeast

## Notes

- 60 % woda destylowana

10 g CaSO<sub>4</sub>  
Fermentacja 9 stopni C  
Nov 2, 2017, 4:16 PM