

## German Pils

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **43**
- SRM **3.6**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **33.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **21.1 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5.75 kg (95.8%)	81 %	4
Grain	Weyermann - Carapils	0.25 kg (4.2%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	50 g	60 min	9.2 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	5 min	2.8 %
Aroma (end of boil)	East Kent Goldings	50 g	0 min	5.1 %
Aroma (end of boil)	Oktawia	25 g	0 min	9.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand Diamond Lager	Lager	Dry	22 g	Danstar