

# German Pils

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **3.8**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **26.7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **35.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **29.2 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **25 min**
- Temp **72 C**, Time **35 min**
- Temp **77 C**, Time **1 min**

## Mash step by step

- Heat up **23.1 liter(s)** of strike water to **56.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **25 min** at **63C**
- Keep mash **35 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **35.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5.4 kg (87.8%)	80 %	4
Grain	Strzegom Monachijski typ I	0.3 kg (4.9%)	79 %	16
Grain	Weyermann - Carapils	0.25 kg (4.1%)	78 %	4
Grain	Weyermann - Acidulated Malt	0.2 kg (3.3%)	80 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Mittelfruh	50 g	60 min	4.6 %
Boil	Tettnang	13 g	60 min	4 %
Boil	Hallertauer Mittelfruh	20 g	15 min	4.6 %
Boil	Tettnang	20 g	15 min	4 %
Aroma (end of boil)	Hallertauer Mittelfruh	28 g	1 min	4.6 %

Aroma (end of boil)	Tettnang	30 g	1 min	4 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	23 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek wapnia	6.5 g	Mash	0 min
Water Agent	Kwas mlekowy	6.5 g	Mash	0 min
Fining	WhirlFloc	2.5 g	Boil	12 min

### Notes

- Chlorek wapnia dodany przed zacieraniem do wody do zacierania.  
Kwas mlekowy dodany do wody użytej do wysładzania.  
*Dec 20, 2017, 1:07 PM*