

# German pils v1

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **37**
- SRM **3**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.9 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5 kg (94.3%)	81 %	2.5
Grain	Weyermann - Carapils	0.3 kg (5.7%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Mittelfruh	60 g	60 min	3 %
Boil	lunga	10 g	60 min	11 %
Whirlpool	Hallertau Mittelfruh	30 g	15 min	3 %
Whirlpool	Hellertau Hersbrucker	60 g	15 min	2.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	250 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Fining	whirlfloc	1.5 g	Boil	15 min
Fining	łuska ryżowa	150 g	Mash	80 min
Water Agent	gips piwowarski	2 g	Boil	90 min

## Notes

- pH zacieru 5.1-5.2

Burzliwa: 14 dni 8 - 12 °C > na ostatnie 2 dni temp 14°C

Cicha: 21 dni 0 °C

Refermentacja 16°C do odpowiedniego nagazowania

*Nov 11, 2018, 2:05 PM*