

# pils niemiecki

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **4.3**
- 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 **8 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **63 C**, Time **50 min**
- Temp **73 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **10 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (80%)	80 %	4
Grain	Strzegom Monachijski typ II	0.5 kg (10%)	79 %	22
Grain	Jęczmień niestodowany	0.5 kg (10%)	75 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	21 g	60 min	11 %
Boil	Tettnang	30 g	20 min	3.2 %
Boil	Tradition	15 g	10 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11 g	Fermentis