

# Pils niemiecki

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **36**
- SRM **5.8**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **50 min**

## Mash step by step

- Heat up **17.9 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **50 min** at **72C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	2.9 kg (56.9%)	80 %	4
Grain	Strzegom Wiedeński	1.05 kg (20.6%)	79 %	10
Grain	Monachijski	0.9 kg (17.6%)	80 %	16
Grain	melanoidowy	0.25 kg (4.9%)	--- %	70

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	18 g	60 min	8 %
Boil	Tettnang	60 g	60 min	2.5 %
Boil	Tettnang	14 g	20 min	2.5 %
Boil	Hersbrucker	25 g	20 min	2.5 %
Aroma (end of boil)	Hersbrucker	20 g	0 min	2.5 %