

# Pils niemiecki

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **29**
- SRM **3.2**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilzneński (Belgia)	5 kg (100%)	81 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	hallertauer taurus	15 g	50 min	15.8 %
Boil	Saaz (Czech Republic)	10 g	15 min	4 %
Aroma (end of boil)	Hallertau Blanc	10 g	5 min	7.4 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	5 min	4 %
Whirlpool	Saaz (Czech Republic)	10 g	0 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
fermentis W34/70	Lager	Dry	11.5 g	---