

# Pils Niemiecki

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- Gravity **13.3 BLG**
- ABV ---
- IBU **27**
- SRM **4.7**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **20 min**

## Mash step by step

- Heat up **18.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **20 min** at **76C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (82%)	80 %	4
Grain	Weyermann - Carapils	0.5 kg (8.2%)	78 %	4
Grain	Weyermann - Acidulated Malt	0.1 kg (1.6%)	80 %	6
Grain	Strzegom Wiedeński	0.5 kg (8.2%)	79 %	10

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13 %
Boil	saphir	20 g	15 min	2.7 %
Whirlpool	Tradition	20 g	30 min	6 %
Dry Hop	Saphir	20 g	5 day(s)	2.7 %
Boil	Tradition	20 g	0 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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FM31 Bawarska Dolina	Lager	Liquid	200 ml	Fermentum Mobile
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