

# Pils niemiecki

---

- 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®<br>2,5-4,5 EBC<br>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 %      |