

## #58 Niemiecki Pils

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **39**
- SRM **3.7**
- 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 **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **3 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **3 min** at **77C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount       | Yield  | EBC |
|-------|--------------------------|--------------|--------|-----|
| Grain | Pilzneński               | 4.8 kg (98%) | 81 %   | 4   |
| Grain | Acid Malt (zakwaszający) | 0.1 kg (2%)  | 58.7 % | 6   |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 25 g   | 60 min | 8.6 %      |
| Boil    | Spalt   | 30 g   | 20 min | 5.7 %      |
| Boil    | Spalt   | 30 g   | 5 min  | 5.7 %      |

### Yeasts

| Name                   | Type  | Form  | Amount | Laboratory       |
|------------------------|-------|-------|--------|------------------|
| FM30 Bohemska rapsodia | Lager | Slant | 300 ml | Fermentum Mobile |

### Extras

| Type   | Name      | Amount | Use for | Time   |
|--------|-----------|--------|---------|--------|
| Fining | whirlfloc | 1 g    | Boil    | 10 min |