

## P.38 - Pils

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **4.1**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **11 %/h**
- Boil size **28.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.8 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

### Fermentables

| Type    | Name                          | Amount         | Yield | EBC |
|---------|-------------------------------|----------------|-------|-----|
| Grain   | Weyermann - Pilsner Malt      | 3.6 kg (73.5%) | 81 %  | 5   |
| Adjunct | Chleb pszenno żytni           | 0.7 kg (14.3%) | 81 %  | 5   |
| Grain   | Weyermann - Carapils          | 0.3 kg (6.1%)  | 78 %  | 4   |
| Grain   | Weyermann - Monachijski typ I | 0.3 kg (6.1%)  | 80 %  | 16  |

### Hops

| Use for   | Name    | Amount | Time   | Alpha acid |
|-----------|---------|--------|--------|------------|
| Boil      | Sybilla | 10 g   | 60 min | 6.4 %      |
| Boil      | Sybilla | 20 g   | 20 min | 6.4 %      |
| Whirlpool | Sybilla | 70 g   | 10 min | 6.4 %      |

### Yeasts

| Name             | Type  | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry  | 23 g   | Fermentis  |

### Notes

- 50 % wody demineralizowanej do zacierania i do wystadzania.

Zacieranie:

- 1,5 ml kwasu mlekowego;
- 1,2 g Chlorek wapnia;
- 0.3 g Gips piwowarski;
- 1,8 g Sól epsom;

Woda do wystadzania:

- 2,0 ml kwasu mlekowego;
- 1,6 g Chlorek wapnia;
- 0.4 g Gips piwowarski;
- 2,4 g Sól epsom;

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