

## Pils

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **33**
- SRM **3.9**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

### Steps

- Temp **65 C**, Time **70 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **18.2 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name         | Amount        | Yield | EBC |
|-------|--------------|---------------|-------|-----|
| Grain | Pilzneński   | 5 kg (96.2%)  | 81 %  | 4   |
| Grain | Caramel Pale | 0.2 kg (3.8%) | 77 %  | 8   |

### Hops

| Use for | Name        | Amount | Time   | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil    | lunga       | 10 g   | 30 min | 11 %       |
| Boil    | lunga       | 40 g   | 15 min | 11 %       |
| Boil    | Amora Preta | 100 g  | 0 min  | 11.2 %     |

### Yeasts

| Name    | Type | Form   | Amount | Laboratory |
|---------|------|--------|--------|------------|
| OYL-091 | Ale  | Liquid | 1 ml   | Omega      |