

## pils 2

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- Gravity **14.6 BLG**
- ABV ---
- IBU **37**
- SRM **4.3**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **27.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount        | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Pilzneński             | 5 kg (90.9%)  | 81 %  | 4   |
| Grain | Briess - Carapils Malt | 0.5 kg (9.1%) | 74 %  | 3   |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Marynka           | 30 g   | 60 min | 10 %       |
| Boil    | Lublin (Lubelski) | 15 g   | 30 min | 4 %        |
| Boil    | Perle             | 15 g   | 5 min  | 7 %        |

### Yeasts

| Name                               | Type  | Form | Amount | Laboratory      |
|------------------------------------|-------|------|--------|-----------------|
| Mangrove Jack's M84 Bohemian Lager | Lager | Dry  | 10 g   | Mangrove Jack's |