

## Pierwsze piwo - bitter

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **35**
- SRM **6.7**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.6 liter(s)**
- Total mash volume **8.8 liter(s)**

### Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **6.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount        | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt  | 2 kg (90.9%)  | 80 %  | 5   |
| Grain | Weyermann - Carawheat | 0.2 kg (9.1%) | 77 %  | 97  |

### Hops

| Use for             | Name               | Amount | Time   | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil                | East Kent Goldings | 25 g   | 60 min | 5.1 %      |
| Aroma (end of boil) | Lublin (Lubelski)  | 15 g   | 10 min | 4 %        |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |