

## Pils

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **48**
- SRM **3.3**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 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 **50 C**, Time **30 min**
- Temp **64 C**, Time **30 min**
- Temp **70 C**, Time **30 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **70C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount        | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Pilzneński             | 4 kg (95.2%)  | 81 %  | 4   |
| Grain | Briess - Carapils Malt | 0.2 kg (4.8%) | 74 %  | 3   |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Lublin (Lubelski) | 50 g   | 60 min | 6.5 %      |
| Boil                | Lublin (Lubelski) | 15 g   | 15 min | 6.5 %      |
| Aroma (end of boil) | Lublin (Lubelski) | 25 g   | 5 min  | 6.5 %      |

### Yeasts

| Name | Type  | Form  | Amount | Laboratory |
|------|-------|-------|--------|------------|
| ge   | Lager | Slant | 11 ml  | ---        |