

pils

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **30**
- SRM **3**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **52.8 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **25.4 liter(s)**
- Total mash volume **33.1 liter(s)**

Steps

- Temp **45 C**, Time **0 min**
- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **90 min**

Mash step by step

- Heat up **25.4 liter(s)** of strike water to **48.8C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **15 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **90 min** at **72C**
- Sparge using **35.1 liter(s)** of **76C** water or to achieve **52.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|---------------|-------|-----|
| Grain | Pilzneński | 7 kg (90.9%) | 81 % | 4 |
| Grain | Cara-Pils/Dextrine | 0.7 kg (9.1%) | 72 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 25 g | 60 min | 10 % |
| Boil | Marynka | 35 g | 30 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 0 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry | 22 g | Fermentis |