

norma

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **16**
- SRM **9.8**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **24 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|--------|-----|
| Grain | Briess - Pilsen Malt | 6 kg (85.7%) | 80.5 % | 2 |
| Grain | Strzegom Karmel 150 | 1 kg (14.3%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | lubelski | 30 g | 60 min | 7 % |