

Mój lager

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **48**
- SRM **4.1**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **52 C**, Time **15 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|--------|-----|
| Grain | BESTMALZ - Best Pilsen | 3.4 kg (75.6%) | 80.5 % | 4 |
| Grain | Strzegom Wiedeński | 0.6 kg (13.3%) | 79 % | 10 |
| Grain | Karmelowy Jasny 30EBC | 0.15 kg (3.3%) | 75 % | 30 |
| Grain | Płatki owsiane | 0.35 kg (7.8%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil | Amarillo | 40 g | 10 min | 9.5 % |
| Boil | Styrian Wolf | 25 g | 60 min | 11.1 % |