

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **33**
- SRM **6.6**
- Style **Vienna Lager**

### 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 **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

### Steps

- Temp **54 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **75 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **40 min** at **63C**
- Keep mash **15 min** at **75C**
- Keep mash **15 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount         | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Strzegom Wiedeński    | 3.4 kg (69.4%) | 79 %  | 10  |
| Grain | Monachijski           | 0.6 kg (12.2%) | 80 %  | 16  |
| Grain | Strzegom Karmel 30    | 0.4 kg (8.2%)  | 75 %  | 30  |
| Grain | Jęczmień niesłodowany | 0.5 kg (10.2%) | 75 %  | 2   |

### Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Brewers Gold          | 30 g   | 60 min | 7.6 %      |
| Boil    | Saaz (Czech Republic) | 25 g   | 20 min | 4.5 %      |