

## alles klar

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **21**
- SRM **5.9**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield  | EBC |
|-------|----------------------|----------------|--------|-----|
| Grain | Strzegom Wiedeński   | 1.5 kg (37.5%) | 79 %   | 10  |
| Grain | Monachijski          | 1 kg (25%)     | 80 %   | 16  |
| Grain | Briess - Pilsen Malt | 1 kg (25%)     | 80.5 % | 2   |
| Grain | Pszeniczny           | 0.5 kg (12.5%) | 85 %   | 4   |

### Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil                | Magnum | 10 g   | 60 min | 13.5 %     |
| Aroma (end of boil) | Nugget | 5 g    | 5 min  | 13 %       |

### Yeasts

| Name             | Type  | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry  | 11.5 g | Fermentis  |

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 2.5 g  | Boil    | 15 min |