

Ciemny lager - Schwarzbier

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **23**
- SRM **24.1**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.9 liter(s) / kg**
- Mash size **7 liter(s)**
- Total mash volume **9.4 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **7 liter(s)** of strike water to **72.7C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 2.2 kg (91.7%) | 80 % | 4 |
| Grain | Fawcett - Pszoniczny Czekoladowy | 0.2 kg (8.3%) | 73 % | 1001 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil | Hallertau Mittelfruh | 20 g | 60 min | 3 % |
| Boil | Hallertau Mittelfruh | 20 g | 20 min | 3 % |
| Boil | Hallertau Mittelfruh | 10 g | 5 min | 3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry | 8 g | Fermentis |