

Schwarzbier

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **23**
- SRM **24.9**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.2 liter(s)**
- Total mash volume **28.6 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.2 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Pilzneński | 5 kg (78.7%) | 81 % | 4 |
| Grain | Słód Caramunich Typ II Weyermann | 0.5 kg (7.9%) | 73 % | 120 |
| Grain | Biscuit Malt | 0.25 kg (3.9%) | 79 % | 45 |
| Grain | Carafa II | 0.25 kg (3.9%) | 70 % | 812 |
| Grain | Fawcett - Pale Chocolate | 0.2 kg (3.1%) | 71 % | 600 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.15 kg (2.4%) | 73 % | 900 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil | Magnum | 20 g | 60 min | 10 % |
| Boil | Hallertau Mittelfruh | 25 g | 15 min | 3.8 % |
| Boil | Hallertau Mittelfruh | 25 g | 5 min | 3.8 % |