

# Schwarzbier

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **30**
- SRM **27.1**
- Style **Schwarzbier**

## 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 **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount       | Yield | EBC  |
|-------|----------------------------------|--------------|-------|------|
| Grain | Pilzneński                       | 4.1 kg (82%) | 81 %  | 4    |
| Grain | Słód Caramunich Typ II Weyermann | 0.25 kg (5%) | 73 %  | 120  |
| Grain | Biscuit Malt                     | 0.25 kg (5%) | 79 %  | 45   |
| Grain | Carafa II Special                | 0.25 kg (5%) | 79 %  | 1400 |
| Grain | Fawcett - Pale Chocolate         | 0.15 kg (3%) | 71 %  | 600  |

## Hops

| Use for | Name                 | Amount | Time   | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil    | Magnum               | 15 g   | 60 min | 13.5 %     |
| Boil    | Hallertau Mittelfruh | 35 g   | 15 min | 3 %        |
| Boil    | Hallertau Mittelfruh | 25 g   | 5 min  | 3 %        |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 4 g    | Boil    | 10 min |