

# SCHWARZBIER III

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **28.1**
- 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 **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **55 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **3 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **55 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **3 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount          | Yield | EBC  |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński         | 3 kg (57.7%)    | 80 %  | 4    |
| Grain | Strzegom Monachijski typ II | 1.15 kg (22.1%) | 79 %  | 22   |
| Grain | Karmelowy Jasny 30EBC       | 0.15 kg (2.9%)  | 75 %  | 30   |
| Grain | Strzegom Karmel 600         | 0.2 kg (3.8%)   | 68 %  | 601  |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (5.8%)   | 68 %  | 1200 |
| Grain | Płatki owsiane              | 0.4 kg (7.7%)   | 85 %  | 3    |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Magnat    | 15 g   | 60 min | 13.2 %     |
| Boil    | Tradition | 25 g   | 30 min | 5.5 %      |
| Boil    | Tradition | 25 g   | 5 min  | 5.5 %      |

## Yeasts

| <b>Name</b>      | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|------------------|-------------|-------------|---------------|-------------------|
| Saflager W 34/70 | Lager       | Dry         | 22 g          | Fermentis         |

### **Extras**

| <b>Type</b> | <b>Name</b>               | <b>Amount</b> | <b>Use for</b> | <b>Time</b> |
|-------------|---------------------------|---------------|----------------|-------------|
| Fining      | whirlflock                | 5 g           | Boil           | 15 min      |
| Flavor      | cukier kandyzowany ciemny | 100 g         | Boil           | 10 min      |