

# SHWARZBIER

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- Gravity **12.4 BLG**
- ABV ---
- IBU **27**
- SRM **36.1**
- 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 **73 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **26.5 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **20.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **77C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Briess - Pilsen Malt        | 2.2 kg (37.3%) | 80.5 % | 2    |
| Grain | Strzegom Monachijski typ I  | 3 kg (50.8%)   | 79 %   | 16   |
| Grain | Strzegom Karmel 150         | 0.3 kg (5.1%)  | 75 %   | 150  |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3.4%)  | 68 %   | 1200 |
| Grain | Carafa III                  | 0.1 kg (1.7%)  | 70 %   | 1034 |
| Grain | Jęczmień palony             | 0.1 kg (1.7%)  | 55 %   | 985  |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Hallertau | 40 g   | 60 min | 4.5 %      |
| Boil    | Hallertau | 30 g   | 20 min | 4.5 %      |
| Boil    | Hallertau | 20 g   | 5 min  | 4.5 %      |

## Yeasts

| Name            | Type  | Form | Amount | Laboratory      |
|-----------------|-------|------|--------|-----------------|
| Saflager S - 23 | Lager | Dry  | 11.5 g | Saflager S - 23 |