

Schwarzbier

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **22**
- SRM **30.8**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Viking Pale Ale malt | 1.16 kg (33.1%) | 80 % | 5 |
| Grain | Strzegom Monachijski typ II | 1.87 kg (53.6%) | 79 % | 22 |
| Grain | Caramel/Crystal Malt - 120L | 0.22 kg (6.2%) | 72 % | 236 |
| Grain | Strzegom Czekoladowy ciemny | 0.14 kg (4%) | 68 % | 1200 |
| Grain | Carafa III | 0.08 kg (2.2%) | 70 % | 1034 |
| Grain | Strzegom Barwiący | 0.03 kg (0.9%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------------|---------|--------|------------|
| Boil | Hallertau tradition | 24.38 g | 60 min | 4.3 % |
| Boil | Hallertau tradition | 8.13 g | 20 min | 4.3 % |
| Aroma (end of boil) | Hallertau tradition | 8.13 g | 5 min | 4.3 % |