

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 %