

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