

Schwarzbier 2019

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **19.3**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **27.5 liter(s)**

Steps

- Temp **45 C**, Time **0 min**
- Temp **62 C**, Time **120 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **48.1C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **120 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	4 kg (72.7%)	81 %	5
Grain	Strzegom Monachijski typ I	1 kg (18.2%)	79 %	16
Grain	Weyermann - Carapils	0.2 kg (3.6%)	78 %	4
Grain	Weyermann - Dehusked Carafa III	0.3 kg (5.5%)	70 %	1024

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	25 g	100 min	9.2 %
Boil	Lublin (Lubelski)	15 g	30 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	200 ml	Fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	Irish Moss	3 g	Boil	15 min