Schwarzbier I

- Gravity **12.5 BLG**
- ABV **---**
- IBU **27**
- SRM **29**
- 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 **15 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **17.3 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.2 kg *(50.9%)*	81 %	4
Grain	Strzegom Monachijski typ II	1.8 kg *(41.7%)*	79 %	22
Grain	Strzegom Karmel 600	0.2 kg *(4.6%)*	68 %	601
Grain	Strzegom Barwiący	0.08 kg *(1.9%)*	68 %	1300
Grain	Strzegom pszenica prażona	0.04 kg *(0.9%)*	70 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.9 %
Aroma (end of boil)	Tradition	20 g	10 min	5.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	50 ml	Fermentum Mobile

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Fining	żelatyna	5 g	Secondary	5 day(s)