

# Schwarzbier

- Gravity **12.1 BLG**
- ABV ---
- IBU **25**
- SRM **37.1**
- 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 **13.5 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.5 kg (33.3%)	81 %	4
Grain	Monachijski	2.3 kg (51.1%)	80 %	16
Grain	Strzegom Karmel 150	0.3 kg (6.7%)	75 %	150
Grain	Czekoladowy	0.2 kg (4.4%)	60 %	788
Grain	Carafa III	0.1 kg (2.2%)	70 %	1034
Grain	Jęczmień palony	0.1 kg (2.2%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	25 g	60 min	5.5 %
Boil	Tradition	15 g	20 min	5.5 %
Boil	Tradition	15 g	5 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
LAGER Y497	Lager	Dry	11 g	Mauribrew