

# Schwarzbier

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- Gravity **13.1 BLG**
- ABV ---
- IBU **29**
- SRM **20.2**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **26.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **35.1 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22.3 liter(s)**
- Total mash volume **27.9 liter(s)**

## Steps

- Temp **45 C**, Time **0 min**
- Temp **63 C**, Time **30 min**
- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **22.3 liter(s)** of strike water to **48.1C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **30 min** at **63C**
- Keep mash **60 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **35.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	4 kg (71.7%)	81 %	5
Grain	Strzegom Monachijski typ I	1 kg (17.9%)	79 %	16
Grain	Weyermann - Carapils	0.2 kg (3.6%)	78 %	4
Grain	Weyermann - Dehusked Carafa II	0.2 kg (3.6%)	70 %	837
Grain	Weyermann - Dehusked Carafa III	0.18 kg (3.2%)	70 %	1024

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Tradition	50 g	100 min	5.5 %
Boil	Tradition	15 g	10 min	5.5 %
Boil	Tradition	15 g	0 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM30 Bohemska rapsodia	Lager	Slant	250 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Fining	Irish Moss	5 g	Boil	15 min

### Notes

- w oparciu o recepture:  
<http://meinsudhaus.de/bier-rezepte/untergaerige-biere/schwarzbier/>  
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