

# SCHWARZBIER V

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **22**
- SRM **24**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **24.6 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **35 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **18.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **35 min** at **62C**
- Keep mash **30 min** at **70C**
- Keep mash **2 min** at **78C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (48.8%)	80 %	4
Grain	Strzegom Monachijski typ I	2.5 kg (40.7%)	79 %	16
Grain	Strzegom Karmel 30	0.25 kg (4.1%)	75 %	30
Grain	Strzegom Czekoladowy 1200	0.3 kg (4.9%)	68 %	1202
Grain	Jęczmień palony	0.1 kg (1.6%)	55 %	1000

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	35 g	50 min	6.3 %
Boil	Hallertau Tradition	20 g	10 min	5 %
Aroma (end of boil)	Hallertau Tradition	15 g	1 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M76 Bavarian Lager	Lager	Slant	420 ml	---
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### Extras

Type	Name	Amount	Use for	Time
Fining	whirlflock	1.25 g	Boil	10 min

### Notes

- jęczmień palony na koniec zacierania czekoladowy 1200 dodany do filtracji  
*Jul 16, 2022, 9:30 AM*