

# SCHWARZBIER

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **26**
- SRM **23.3**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.8 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **55 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.6 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **55 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (56.6%)	81 %	4
Grain	Strzegom Monachijski typ I	1.3 kg (24.5%)	79 %	16
Grain	Czekoladowy	0.25 kg (4.7%)	60 %	788
Grain	Strzegom Karmel 30	0.15 kg (2.8%)	75 %	30
Grain	Strzegom Karmel 300	0.15 kg (2.8%)	70 %	299
Grain	Black (Patent) Malt	0.1 kg (1.9%)	55 %	1350
Grain	Pszeniczny	0.25 kg (4.7%)	85 %	4
Adjunct	cukier kandyzowany	0.1 kg (1.9%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	11.2 %
Boil	Tradition	10 g	50 min	5.5 %
Aroma (end of boil)	Tradition	15 g	10 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min

## Notes

- słody palone na ostatnie 10 min zacierania  
*Nov 29, 2018, 9:15 PM*