

# Ciemniuch (robocze)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **24**
- SRM **30.9**
- Style **Dark American Lager**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.1 liter(s)**
- Total mash volume **14.8 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **35 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **11.1 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **65C**
- Keep mash **35 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (81.1%)	82 %	4
Grain	Carafa II	0.2 kg (5.4%)	70 %	812
Grain	Czekoladowy Bruntal	0.2 kg (5.4%)	1 %	788
Grain	Castlemalting Chateau Special B	0.2 kg (5.4%)	70 %	260
Grain	Viking Cookie malt	0.1 kg (2.7%)	70 %	60

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	10 g	60 min	6.7 %
Boil	Perle	20 g	20 min	6.7 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc	1 g	Boil	10 min