

# Ciemny Lager

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **25**
- SRM **13.4**
- Style **Dark American Lager**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **21 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **1.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.5 kg (71.3%)	81 %	4
Grain	Strzegom Monachijski typ II	0.5 kg (14.3%)	79 %	22
Grain	Karmelowy żytni Strzegom	0.5 kg (14.3%)	75 %	150
Grain	Strzegom Barwiący	0.005 kg (0.1%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Herkules	5 g	60 min	17 %
Boil	Hallertau Mittelfruh	10 g	30 min	3 %
Boil	Hallertau Mittelfruh	10 g	15 min	3 %
Aroma (end of boil)	Hallertau Mittelfruh	10 g	30 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	50 ml	Fermentis

## Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Fining	whirlflock	2 g	Boil	15 min