

# Český ležák tmavý MOJA WERSJA

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **21**
- SRM **20**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **85 min**
- Evaporation rate **10 %/h**
- Boil size **28.9 liter(s)**

## Mash information

- Mash efficiency **87 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **22.7 liter(s)**

## Steps

- Temp **51 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **17.3 liter(s)** of strike water to **55.8C**
- Add grains
- Keep mash **10 min** at **51C**
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.7 kg (50%)	81 %	4
Grain	Monachijski	2 kg (37%)	80 %	16
Grain	Karmelowy żytni Strzegom	0.5 kg (9.3%)	75 %	150
Grain	Weyermann - Carafa II	0.2 kg (3.7%)	70 %	1150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	30 g	60 min	6.6 %
Boil	Saaz (Czech Republic)	15 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	10 g	Mangrove Jack's