

# Český Ležák Tmavý 2.0

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **29**
- SRM **29.6**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **10 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.65 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.4 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **70 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **56.4C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **70C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	3 kg (65.2%)	80 %	16
Grain	Pilzneński	1 kg (21.7%)	81 %	4
Grain	Strzegom Karmel 600	0.4 kg (8.7%)	68 %	601
Grain	Black	0.2 kg (4.3%)	55 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	23 g	60 min	8.8 %
Boil	Saaz (Czech Republic)	15 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast 2308 - Munich Lager	Lager	Slant	1000 ml	Wyeast

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	4 g	Boil	15 min

## Notes

- Zacieranie dekokcyjne jednowarowe. Przepis:
    - 52-50 st.C - 15 min
    - dekokt 1/3 podgrzewam do 70-72 st.C - 20 min
    - dekokt podgrzewam do wrzenia - 10 min
    - reszta cały czas w 52-50 st.C
    - dekokt małymi porcjami wlewam do zacieru głównego
    - 70 st.C - 30 min
    - 72-68 st.C - 15 min, wsypujemy sól Black
    - 78 st.C - 10 min i filtracja.
- Mech irlandzki uwodniony przez 2 h  
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