

# Český ležák tmavý z TB

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **27**
- SRM **30.4**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **55 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **55 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (38.5%)	81 %	4
Grain	Monachijski	1.6 kg (30.8%)	80 %	16
Grain	Strzegom Karmel 600	0.4 kg (7.7%)	68 %	601
Grain	Carafa III	0.3 kg (5.8%)	70 %	1034
Grain	Płatki owsiane	0.4 kg (7.7%)	85 %	3
Grain	Słód pszeniczny Bestmalz	0.5 kg (9.6%)	82 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	25 g	60 min	8 %
Aroma (end of boil)	Saaz (Czech Republic)	15 g	15 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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fermentis W34/70	Lager	Dry	22 g	---
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### Extras

Type	Name	Amount	Use for	Time
Fining	whirlflock	6 g	Boil	15 min

### Notes

- Carafa na ostatnie 15 min zacierania  
*Feb 22, 2019, 7:40 PM*