

Český Ležák Tmavý 12L

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **28**
- SRM **29.7**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **16.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **13.8 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 **5 min**

Mash step by step

- Heat up **10.8 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 **5 min** at **78C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **16.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.3 kg (43.3%)	81 %	4
Grain	Monachijski	1.3 kg (43.3%)	80 %	16
Grain	Strzegom Karmel 600	0.25 kg (8.3%)	68 %	601
Grain	Black	0.15 kg (5%)	55 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	50 min	8.8 %
Boil	Saaz (Czech Republic)	20 g	10 min	3.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast 2000 - Budvar Lager	Lager	Slant	1256.54 ml	Wyeast