

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 |