

Monachijskie ciemne

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **14**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **13 %/h**
- Boil size **30.1 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **20.1 liter(s)** of **76C** water or to achieve **30.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	3 kg (60%)	80 %	16
Grain	Pilzneński	1 kg (20%)	81 %	4
Grain	Monachijski Ciemny Steinbach	0.35 kg (7%)	100 %	30
Grain	Czekoladowy	0.15 kg (3%)	60 %	900
Grain	Strzegom Wiedeński	0.5 kg (10%)	79 %	10

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	20 g	60 min	7 %
Boil	Hallertau Tradition	35 g	30 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP800 - Pilsner Lager Yeast	Lager	Slant	100 ml	White Labs