

# Monachijskie ciemne

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **23**
- SRM **25.1**
- Style **Munich Dunkel**

## 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 **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.9 liter(s)**

## Steps

- Temp **67 C**, Time **70 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	4 kg (75.5%)	80 %	20
Grain	Weyermann - Melanoiden Malt	0.5 kg (9.4%)	81 %	53
Grain	Biscuit Malt	0.2 kg (3.8%)	79 %	45
Grain	Weyermann - Carafa I	0.2 kg (3.8%)	70 %	690
Ciemne słydy dodać w 40 min zacierania				
Grain	Weyermann Specjal W	0.3 kg (5.7%)	68 %	300
Ciemne słydy dodać w 40 min zacierania				
Grain	Fawcett - Pszeniczny Czekoladowy	0.1 kg (1.9%)	73 %	1001
Ciemne słydy dodać w 40 min zacierania				

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	50 g	60 min	4 %
Boil	Tettnang	10 g	20 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s-189	Lager	Dry	11.5 g	fermentis