

Munich dunkel - Ciemny lager

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **22**
- SRM **23.9**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **63 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **75.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **38.7 liter(s)**
- Total mash volume **51.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **38.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **50.1 liter(s)** of **76C** water or to achieve **75.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4.5 kg (34.9%)	82 %	4
Grain	Strzegom Monachijski typ I	4.5 kg (34.9%)	79 %	16
Grain	Strzegom Monachijski typ II	3 kg (23.3%)	79 %	22
Grain	Strzegom Czekoladowy ciemny	0.9 kg (7%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	45 g	60 min	11 %
Boil	Sybilla	90 g	5 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
34/70	Lager	Dry	40 g	---