

munich_pils

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **46**
- SRM **4.2**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **28.1 liter(s)**

Mash information

- Mash efficiency **96 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **51 C**, Time **15 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **55.4C**
- Add grains
- Keep mash **15 min** at **51C**
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	1 kg (25%)	80 %	16
Grain	Weyermann - Pilsner Malt	3 kg (75%)	81 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	5 g	60 min	10.5 %
Boil	Northern Brewer	25 g	60 min	7.6 %
Boil	Perle	40 g	20 min	7.3 %
Boil	Fuggles	20 g	10 min	5.3 %