

# Munich ale

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- Gravity **11.9 BLG**
- ABV ---
- IBU **27**
- SRM **13.7**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **21.6 liter(s)**
- Trub loss **12 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.9 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **16.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4 kg (73.1%)	79 %	16
Grain	Pilzneński	1 kg (18.3%)	81 %	4
Grain	Weyermann - Caramunich typ I	0.35 kg (6.4%)	70 %	90
Grain	Weyermann - Dehusked Carafa I	0.025 kg (0.5%)	70 %	690
Grain	Melanoiden Malt	0.1 kg (1.8%)	80 %	39

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis