

# 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  |