

# Dunkiel

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **29**
- SRM **7.2**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.7 liter(s) / kg**
- Mash size **23.5 liter(s)**
- Total mash volume **28.5 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **64 C**, Time **25 min**
- Temp **74 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **23.5 liter(s)** of strike water to **66.5C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **25 min** at **64C**
- Keep mash **20 min** at **74C**
- Keep mash **5 min** at **78C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount       | Yield | EBC |
|-------|---------------------|--------------|-------|-----|
| Grain | Monachijski         | 4.5 kg (90%) | 80 %  | 15  |
| Grain | Strzegom Pilzneński | 0.5 kg (10%) | 80 %  | 4   |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 50 g   | 20 min | 8.8 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | Fermentis  |