

# Munich Dunkel - Piwoszarnia.pl

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **12.1**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **8.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **8.9 liter(s)**
- Boil time **30 min**
- Evaporation rate **10 %/h**
- Boil size **10.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **11.3 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **67 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **9 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **67C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **3.6 liter(s)** of **76C** water or to achieve **10.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1 kg (44.4%)	82 %	4
Grain	Viking Munich Malt	1 kg (44.4%)	78 %	18
Grain	Karmelowy Jasny 30EBC	0.125 kg (5.6%)	75 %	30
Grain	Strzegom Karmel 300	0.125 kg (5.6%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	13 g	30 min	10 %
Boil	Lublin (Lubelski)	13 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Voss Kveik gęstwa	Ale	Slant	300 ml	---