

# Munich Dunkel

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **28**
- SRM **9.5**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **32.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

## Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **30 min**

## Mash step by step

- Heat up **11.4 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **30 min** at **78C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **32.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3 kg (54.5%)	79 %	22
Grain	Viking Melanoidynowy	0.8 kg (14.5%)	75 %	60
Dry Extract	Gozdawa ekstrakt słodowy superjasny suchy	1.7 kg (30.9%)	99 %	9

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (USA)	45 g	60 min	3.75 %
Boil	Magnum	20 g	20 min	13.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Fermentis
Hybrydowe	Lager	Dry	7 g	Coopers Brewery

## Notes

- Przed zadaniem drożdży do brzeczki dodatek wody OAZA do dopełnienia do 25L.  
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Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.