8A. Munich Dunkel

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **20.1**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **21.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.24 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **21 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **59.1C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **8.5 liter(s)** of **76C** water or to achieve **21.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3 kg *(75%)*	79 %	16
Grain	Strzegom Monachijski typ II	0.6 kg *(15%)*	79 %	22
Grain	Weyermann Caramunich 3	0.2 kg *(5%)*	76 %	150
Grain	Weyermann - Carafa II	0.2 kg *(5%)*	70 %	837

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12 g	60 min	11 %
Aroma (end of boil)	Saaz (Czech Republic)	20 g	15 min	4.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lutra	Ale	Slant	100 ml	---

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Water Agent	CaCO3	4 g	Boil	60 min