

Munich Dunkel

- Gravity **12.9 BLG**
- ABV ---
- IBU **22**
- SRM **18.4**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.2 liter(s)**
- Total mash volume **15 liter(s)**

Steps

- Temp **65.5 C**, Time **45 min**

Mash step by step

- Heat up **11.2 liter(s)** of strike water to **73.1C**
- Add grains
- Keep mash **45 min** at **65.5C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Munich Malt	3 kg (80%)	80 %	18
Grain	Briess - Munich Malt 20L	0.3 kg (8%)	74 %	39
Grain	Pale Chocolate	0.15 kg (4%)	72 %	400
Grain	Melanoiden Malt	0.3 kg (8%)	80 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	50 g	30 min	4 %