

Dortmunder

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **43**
- SRM **4.5**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **67 C**, Time **45 min**
- Temp **76 C**, Time **1 min**
- Temp **100 C**, Time **75 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **45 min** at **67C**
- Keep mash **1 min** at **76C**
- Keep mash **75 min** at **100C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.7 kg (75.5%)	81 %	4
Grain	Monachijski typ II 20-25 EBC Weyermann	0.6 kg (12.2%)	80 %	20
Grain	Weyermann - Carapils	0.6 kg (12.2%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Dr Rudi	30 g	50 min	11.8 %
Boil	Mount Hood	10 g	20 min	5.5 %
Aroma (end of boil)	Mount Hood	20 g	5 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	Fermentis