

Dortmunder

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **27**
- SRM **4.9**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10.6 liter(s)**
- Total mash volume **13.3 liter(s)**

Steps

- Temp **66 C**, Time **55 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **10.6 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **55 min** at **66C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	2.3 kg (86.8%)	81 %	6
Grain	Pszeniczny	0.25 kg (9.4%)	85 %	4
Grain	Abbey Castle	0.1 kg (3.8%)	80 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum'21	10 g	40 min	10.6 %
Boil	Spalt'21	35 g	5 min	6.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM30 Bohemska rapsodia	Lager	Liquid	1000 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	Łuska ryżowa	100 g	Mash	100 min

Water Agent	Gips	2.8 g	Mash	100 min
Water Agent	Kwas fosforowy	2 g	Mash	10 min
Do wystadzania				
Fining	WhirlflocT	2 g	Boil	15 min