

Dortmunder

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **4.4**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **11 %**
- Size with trub loss **11.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **14.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **13.7 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **10.7 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **25 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **14.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.5 kg (82%)	81 %	3.9
Grain	Viking Vienna Malt	0.45 kg (14.8%)	79 %	10
Grain	Weyermann Carapils	0.1 kg (3.3%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga Polish Hops	10 g	60 min	10 %
Boil	Hallertau Tradition	5 g	30 min	5.4 %
Aroma (end of boil)	Hallertau Tradition	30 g	5 min	5.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	100 ml	Fermentum Mobile