

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 |