

## dr stout

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **37**
- SRM **31.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount       | Yield | EBC  |
|-------|----------------------|--------------|-------|------|
| Grain | Viking Pale Ale malt | 3.4 kg (68%) | 80 %  | 5    |
| Grain | płatki jęczmienne    | 1 kg (20%)   | 60 %  | 4    |
| Grain | Carafa II            | 0.2 kg (4%)  | 70 %  | 812  |
| Grain | Black (Patent) Malt  | 0.2 kg (4%)  | 55 %  | 1350 |
| Grain | Jęczmień palony      | 0.2 kg (4%)  | 55 %  | 985  |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 25 g   | 60 min | 10 %       |
| Boil    | Fuggles | 20 g   | 30 min | 4.5 %      |
| Boil    | Fuggles | 20 g   | 10 min | 4.5 %      |

### Yeasts

| Name                  | Type | Form  | Amount | Laboratory |
|-----------------------|------|-------|--------|------------|
| Danstar - Windsor Ale | Ale  | Slant | 60 ml  | Danstar    |