

## 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