

## #15 Dry Stout

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **29**
- SRM **39.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **25.9 liter(s)**

### Steps

- Temp **64 C**, Time **80 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **20.1 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **80 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (52.2%)	80 %	5
Grain	Strzegom Monachijski typ II	1.25 kg (21.7%)	79 %	22
Grain	Pszeniczny	0.5 kg (8.7%)	85 %	4
Grain	Strzegom Karmel 600	0.3 kg (5.2%)	68 %	601
Grain	Strzegom Czekoladowy ciemny	0.3 kg (5.2%)	68 %	1200
Grain	Jęczmień palony	0.4 kg (7%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	50 g	60 min	5.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1000 ml	Fermentum Mobile