

## 13. Stout

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **47**
- SRM **11.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20.2 liter(s)**

### Steps

- Temp **68 C**, Time **75 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **75 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **21.6 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	4 kg (79.1%)	83 %	6
Grain	Brown Malt (British Chocolate)	0.3 kg (5.9%)	70 %	128
Grain	Chocolate Malt (UK)	0.036 kg (0.7%)	73 %	887
Grain	Abbey Malt Weyermann	0.22 kg (4.4%)	75 %	45
Grain	Weyermann Specjal W	0.2 kg (4%)	68 %	300
Grain	Płatki owsiane	0.1 kg (2%)	85 %	3
Grain	płatki jęczmienne	0.2 kg (4%)	80 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	15.5 %
Boil	Kent Goldings	20 g	35 min	5.5 %
Aroma (end of boil)	East Kent Goldings	14 g	5 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale