

## Stout03

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **41**
- SRM **35.8**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **28.8 liter(s)**

### Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **22.4 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **30.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilznieński	5 kg (67.6%)	81 %	4
Grain	karmelowy 400	1 kg (13.5%)	68 %	400
Grain	pszenica prażona 1393	0.2 kg (2.7%)	70 %	1393
Grain	Czekoladowy	0.2 kg (2.7%)	68 %	1000
Adjunct	laktoza	1 kg (13.5%)	--- %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Vic Secret (AUS)	30 g	40 min	19.2 %
Dry Hop	Motueka (NZ)	30 g	5 day(s)	6.3 %

### Yeasts

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