

## Forest stout

---

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **31**
- SRM **28.1**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

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

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **22.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (88.9%)	80 %	5
Grain	Carafa II Best	0.4 kg (8.9%)	65 %	1100
Grain	Carared	0.1 kg (2.2%)	75 %	39

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	5 g	60 min	9.1 %
Boil	East Kent Goldings	30 g	15 min	5.7 %
Aroma (end of boil)	East Kent Goldings	30 g	5 min	5.7 %
Boil	pȩdy świerku	50 g	10 min	1 %
Whirlpool	pȩdy świerku	200 g	20 min	1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M12 Voss Kveik	Ale	Slant	100 ml	Mangrove Jack's