

Stout

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **44**
- SRM **26.9**

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 **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **55 C**, Time **15 min**
- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **15.4 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.9 kg (88.6%)	80 %	5
Grain	Jęczmień palony	0.3 kg (6.8%)	55 %	985
Grain	Fawcett - Pszeniczny Czekoladowy	0.2 kg (4.5%)	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	35 g	1 min	10.5 %
Boil	Fuggles	35 g	45 min	4.5 %
Boil	Target	15 g	60 min	10.5 %
Boil	Fuggles	15 g	60 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis