

Stout

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **32**
- SRM **31.2**
- Style **Other Smoked Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **17.6 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (56.8%)	80 %	5
Grain	Jęczmień palony	0.35 kg (8%)	55 %	985
Grain	Strzegom Czekoladowy ciemny	0.2 kg (4.5%)	68 %	1200
Grain	Wędzony bukiem Viking Malt	0.5 kg (11.4%)	82 %	10
Grain	Monachijski	0.5 kg (11.4%)	80 %	16
Grain	Płatki owsiane	0.35 kg (8%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	50 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	100 ml	Fermentum Mobile