

# Black Smrek - Forest Stout

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **28**
- SRM **25.2**
- Style **American Stout**

## 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 **20 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

## Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **17.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (84.7%)	80 %	5
Grain	Brown Malt (British Chocolate)	0.5 kg (8.5%)	70 %	128
Grain	Jęczmień palony	0.2 kg (3.4%)	55 %	985
Grain	Czekoladowy	0.2 kg (3.4%)	60 %	788

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	30 g	60 min	8 %
Aroma (end of boil)	Premiant	20 g	5 min	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale K-97	Ale	Slant	200 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	Gałęzie świerkowe	100 g	Boil	30 min

Flavor	Gałęzie świerkowe	100 g	Boil	2 min
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