

# Świąteczny FES

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU ---
- SRM **35.3**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **21.8 liter(s)**
- Total mash volume **30.4 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **21.8 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.25 kg (60.3%)	80 %	5
Grain	Strzegom Monachijski typ II	0.5 kg (5.7%)	79 %	22
Grain	Strzegom Karmel 30	0.75 kg (8.6%)	75 %	30
Grain	Strzegom Wiedeński	1 kg (11.5%)	79 %	10
Grain	Strzegom Czekoladowy ciemny	0.15 kg (1.7%)	68 %	1200
Grain	Płatki owsiane	0.6 kg (6.9%)	60 %	3
Grain	Strzegom Barwiący	0.45 kg (5.2%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Lublin (Lubelski)	60 g	60 min	4 %
Mash	Marynka	30 g	10 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Fermentis

## Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Water Agent	gips	4 g	Mash	30 min
Fining	whirlfloc	0.5 g	Boil	50 min
Spice	goździki	5 g	Boil	50 min
Spice	cukier waniliowy	15 g	Boil	50 min
Spice	gałka muszkatałowa	10 g	Boil	50 min
Spice	skórka z pomarańczy	140 g	Boil	50 min