

# FES

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- Gravity **17.5 BLG**
- ABV **7.5 %**
- IBU **39**
- SRM **49**
- Style **Foreign Extra 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 **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **28.8 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **21.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (69.4%)	85 %	7
Grain	Caraaroma	0.5 kg (6.9%)	78 %	400
Grain	Carafa II	0.5 kg (6.9%)	70 %	1050
Grain	Jęczmień palony	0.4 kg (5.6%)	55 %	1050
Grain	Płatki owsiane	0.8 kg (11.1%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	50 g	55 min	7.6 %
Boil	East Kent Goldings	50 g	5 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM-13	Ale	Slant	250 ml	Fermentum Mobile

## Notes

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