

# FES

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- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **35**
- SRM **25.1**
- 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 **65 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (83.3%)	80 %	4
Grain	Płatki jęczmienne	0.4 kg (6.7%)	70 %	4
Grain	Caraaroma	0.3 kg (5%)	74 %	400
Grain	Jęczmień palony	0.2 kg (3.3%)	70 %	1000
Grain	Weyermann - Carafa I	0.1 kg (1.7%)	70 %	800

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Aurora	35 g	55 min	8.5 %
Boil	Styrian Golding	45 g	10 min	3.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	30 ml	Fermentum Mobile

## Notes

- <http://blog.homebrewing.pl/foreign-extra-stout-receptura/>

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

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