

# FES

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **32**
- SRM **35**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **13.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **16.7 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **13.4 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **3.7 liter(s)** of **76C** water or to achieve **13.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (59.9%)	80 %	4
Grain	Płatki owsiane	0.4 kg (12%)	60 %	3
Grain	Special B Castle	0.2 kg (6%)	70 %	350
Grain	Fawcett - Pale Chocolate	0.2 kg (6%)	71 %	500
Grain	Fawcett - Pszeniczny Czekoladowy	0.11 kg (3.3%)	73 %	1001
Grain	Strzegom Monachijski typ I	0.38 kg (11.4%)	79 %	16
Grain	Carafa II	0.05 kg (1.5%)	70 %	1000

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	10.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	120 ml	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	Chlorek wapnia	4.5 g	Mash	60 min
Water Agent	Kreda	4 g	Mash	60 min