

# FES wersja poprawiona

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- Gravity **15.9 BLG**
- ABV ---
- IBU **50**
- SRM **36.7**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **25.5 liter(s)**
- Total mash volume **34 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **25.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.6 kg (42.4%)	81 %	4
Grain	Strzegom Monachijski typ I	2.4 kg (28.2%)	79 %	16
Grain	Płatki owsiane	1 kg (11.8%)	60 %	3
Grain	Fawcett - Crystal	0.5 kg (5.9%)	70 %	160
Grain	Weyermann - Dehusked Carafa II	0.5 kg (5.9%)	70 %	837
Grain	Castle Chocolat	0.5 kg (5.9%)	60 %	827

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	54 g	60 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	13.75 g	Fermentis