

# FES

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **41**
- SRM **44.4**
- 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 **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.3 liter(s)**
- Total mash volume **28.4 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **21.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.5 kg (63.4%)	80 %	4
Grain	Abbey Castle	0.5 kg (7%)	80 %	45
Grain	Carafa II	0.4 kg (5.6%)	70 %	812
Grain	Jęczmień palony	0.3 kg (4.2%)	55 %	985
Grain	Caraaroma	0.4 kg (5.6%)	78 %	400
Grain	płatki jęczmienne	0.8 kg (11.3%)	71 %	3
Grain	Strzegom pszenica prażona	0.2 kg (2.8%)	70 %	1000

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	8.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Fining	whirlfloc	1.25 g	Boil	15 min
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## Notes

- Wszystkie słydy dodane od początku gotowania, prażone ziarna pod koniec zacierania na ostate 15  
*Jul 18, 2019, 1:55 PM*