

## Oaked FES

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- Gravity **19.9 BLG**
- ABV ---
- IBU **70**
- SRM **40**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **10 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **22.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

### Steps

- Temp **64 C**, Time **90 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **20.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **90 min** at **64C**
- Keep mash **0 min** at **76C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (73.5%)	79 %	6
Grain	Weyermann - Dark Wheat Malt	0.5 kg (7.4%)	85 %	14
Grain	Strzegom Karmel 30	0.2 kg (2.9%)	75 %	30
Grain	płatki owsiane	0.4 kg (5.9%)	65 %	---
Grain	pszenica palona	0.3 kg (4.4%)	55 %	985
Grain	Weyermann - Chocolate Wheat	0.4 kg (5.9%)	74 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	15 g	5 min	15.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	150 ml	Safale

### Extras

Type	Name	Amount	Use for	Time
Other	płatki dębowe amerykańskie średnio palone	100 g	Secondary	21 day(s)

## Notes

- FFT,  
21 dni z płatkami dębowymi  
*Jan 27, 2016, 9:24 PM*