

## Smoked FES

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- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **46**
- SRM **47.3**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Wędzony bukiem Viking Malt	5.5 kg (73.3%)	82 %	10
Grain	Barley, Flaked	0.5 kg (6.7%)	70 %	4
Grain	Chocolate Malt (UK)	0.7 kg (9.3%)	73 %	887
Grain	Strzegom Karmel 300	0.5 kg (6.7%)	70 %	299
Grain	Jęczmień palony	0.3 kg (4%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	45 g	60 min	11 %