

# Smoked FES

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **19**
- SRM **35.1**
- 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 **2 liter(s) / kg**
- Mash size **19 liter(s)**
- Total mash volume **28.5 liter(s)**

## Steps

- Temp **66 C**, Time **50 min**
- Temp **70 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **19 liter(s)** of strike water to **77.5C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **70C**
- Keep mash **1 min** at **78C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (52.6%)	79 %	6
Grain	Grodziski pszeniczny wędzony dębem	2 kg (21.1%)	80 %	3
Grain	Słód Caramunich Typ II Weyermann	0.5 kg (5.3%)	73 %	120
Grain	Carafa III	0.3 kg (3.2%)	70 %	1034
Grain	Weyermann żytni czekoladowy	0.5 kg (5.3%)	70 %	600
Grain	Płatki owsiane	0.5 kg (5.3%)	85 %	3
Grain	Płatki żytnie	0.5 kg (5.3%)	85 %	5
Grain	Jęczmień palony	0.2 kg (2.1%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	60 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	10 min	4 %

## Yeasts

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

## Notes

- Za mało siodu wędzonego. Wędzonka niewyczuwalna.  
*Jan 31, 2019, 10:55 AM*