

# 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*