

# FES 1

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **30**
- SRM **47.5**
- 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 **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

## Steps

- Temp **65 C**, Time **70 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **70 min** at **65C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield | EBC  |
|-------|---------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński       | 2.2 kg (34.9%) | 80 %  | 4    |
| Grain | Strzegom Wiedeński        | 1.5 kg (23.8%) | 79 %  | 10   |
| Grain | Strzegom Czekoladowy 400  | 0.5 kg (7.9%)  | 68 %  | 400  |
| Grain | Strzegom Pszeniczny       | 0.5 kg (7.9%)  | 81 %  | 6    |
| Grain | Strzegom Jęczmień Palony  | 0.5 kg (7.9%)  | 55 %  | 985  |
| Grain | Caraaroma                 | 0.4 kg (6.3%)  | 78 %  | 400  |
| Grain | Płatki owsiane            | 0.4 kg (6.3%)  | 85 %  | 3    |
| Grain | Strzegom pszenica prażona | 0.25 kg (4%)   | 70 %  | 1000 |
| Grain | Caraamber                 | 0.05 kg (0.8%) | 75 %  | 59   |

## Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Marynka    | 12 g   | 60 min | 8.7 %      |
| Boil    | Centennial | 20 g   | 60 min | 9.7 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |