

FES

- Gravity **18.7 BLG**
- ABV ---
- IBU **68**
- SRM **72**
- 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 **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **68 C**, Time **70 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|------|
| Grain | Strzegom Pale Ale | 4 kg (52.6%) | 79 % | 6 |
| Grain | Płatki owsiane | 1 kg (13.2%) | 85 % | 3 |
| Grain | Casle Malting Whisky Nature | 1 kg (13.2%) | 85 % | 4 |
| Grain | Strzegom Karmel 150 | 0.4 kg (5.3%) | 75 % | 150 |
| Grain | Special B Malt | 0.4 kg (5.3%) | 65.2 % | 315 |
| Grain | Strzegom Czekoladowy 1200 | 0.8 kg (10.5%) | 68 % | 1202 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Admiral | 50 g | 60 min | 14.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 23 g | Safale |