

## SPECIAL FES

---

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **26**
- SRM **55.1**
- 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **28.8 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **21.6 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount        | Yield  | EBC  |
|-------|---------------------------|---------------|--------|------|
| Grain | Weyermann - Pale Ale Malt | 5 kg (69.4%)  | 85 %   | 7    |
| Grain | Carafa II                 | 0.5 kg (6.9%) | 70 %   | 1050 |
| Grain | Caraaroma                 | 0.5 kg (6.9%) | 78 %   | 400  |
| Grain | Carafa III                | 0.2 kg (2.8%) | 70 %   | 1034 |
| Grain | Jęczmień palony           | 0.3 kg (4.2%) | 55 %   | 985  |
| Grain | Castle Cafe               | 0.3 kg (4.2%) | 75.5 % | 480  |
| Grain | Płatki owsiane            | 0.4 kg (5.6%) | 60 %   | 3    |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Challenger | 30 g   | 50 min | 8 %        |
| Boil    | Golding    | 30 g   | 15 min | 3.8 %      |

### Yeasts

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