

FES#1

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU ---
- SRM **44.3**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **15 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **14.4 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **15.4 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **3.4 liter(s)** of **76C** water or to achieve **14.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|--------|-----|
| Grain | Viking Pilsner malt | 3.5 kg (79.5%) | 82 % | 4 |
| Grain | carabody | 0.2 kg (4.5%) | 75 % | 8 |
| Grain | Castle Cafe | 0.3 kg (6.8%) | 75.5 % | 480 |
| Grain | Jęczmień palony | 0.4 kg (9.1%) | 55 % | 985 |