

sef 2.0

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **48**
- SRM **41.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **11.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|------|
| Grain | Fawcett- Maris Otter | 2.5 kg (64.1%) | 80 % | 6 |
| Grain | Fawcett - Chocolate Malt | 0.25 kg (6.4%) | 70 % | 1100 |
| Grain | Fawcett-cara malt | 0.25 kg (6.4%) | 70 % | 30 |
| Grain | Fawcett-roasted barley | 0.25 kg (6.4%) | 70 % | 600 |
| Grain | Fawcett - Pale Chocolate | 0.25 kg (6.4%) | 71 % | 600 |
| Grain | Płatki gryczane | 0.4 kg (10.3%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Fuggles | 25 g | 60 min | 5 % |
| Boil | East Kent Goldings | 25 g | 30 min | 4.8 % |
| Boil | Aurora | 25 g | 10 min | 4.8 % |
| Boil | East Kent Goldings | 20 g | 10 min | 5.1 % |
| Boil | Fuggles | 20 g | 5 min | 5 % |

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Dry | 11 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Water Agent | gips | 2 g | Mash | 10 min |