

## sef

---

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **39**
- SRM **31.9**
- 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 **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.2 liter(s)**
- Total mash volume **16.2 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **12.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Simpsons - Golden Promise | 2.5 kg (61.7%) | 81 %  | 4   |
| Grain | Fawcett - Pale Chocolate  | 0.25 kg (6.2%) | 71 %  | 600 |
| Grain | Fawcett - Crystal         | 0.25 kg (6.2%) | 70 %  | 160 |
| Grain | Fawcett-cara malt         | 0.25 kg (6.2%) | 70 %  | 30  |
| Grain | Fawcett-roasted barley    | 0.2 kg (4.9%)  | 70 %  | 600 |
| Grain | Fawcett-roasted rye       | 0.2 kg (4.9%)  | 70 %  | 240 |
| Grain | Płatki owsiane            | 0.2 kg (4.9%)  | 85 %  | 3   |
| Grain | płatki jęczmienne         | 0.2 kg (4.9%)  | 85 %  | 3   |

### Hops

| Use for | Name            | Amount | Time   | Alpha acid |
|---------|-----------------|--------|--------|------------|
| Boil    | Styrian Golding | 50 g   | 60 min | 3.6 %      |
| Boil    | Saaz (USA)      | 50 g   | 10 min | 3.75 %     |

### Yeasts

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale         | Dry         | 11 g          | Safale            |

### **Extras**

| <b>Type</b> | <b>Name</b> | <b>Amount</b> | <b>Use for</b> | <b>Time</b> |
|-------------|-------------|---------------|----------------|-------------|
| Water Agent | gips        | 2 g           | Boil           | 10 min      |