

FEs

- Gravity **22.5 BLG**
- ABV **10.2 %**
- IBU **71**
- SRM **59.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **28.1 liter(s)**
- Total mash volume **38.9 liter(s)**

Steps

- Temp **55 C**, Time **15 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **0 min**

Mash step by step

- Heat up **28.1 liter(s)** of strike water to **61.7C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **77C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Pilzneński | 3.4 kg (31.5%) | 81 % | 4 |
| Grain | Słód Wędzony Steinbach | 3 kg (27.8%) | 80 % | 5 |
| Grain | Strzegom Torf | 2 kg (18.5%) | 85 % | 4 |
| Grain | Fawcett - Pale Chocolate | 0.5 kg (4.6%) | 1 % | 600 |
| Grain | Bestmalz Red X | 0.5 kg (4.6%) | 79 % | 30 |
| Grain | Weyermann - Chocolate Wheat | 0.5 kg (4.6%) | 1 % | 788 |
| Grain | Black (Patent) Malt | 0.5 kg (4.6%) | 1 % | 985 |
| Grain | Carafa III | 0.4 kg (3.7%) | 1 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Chinook | 45 g | 60 min | 13 % |
| Boil | Simcoe | 40 g | 30 min | 13.2 % |

Yeasts

Recipe has been printed via **BREWNES.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 |