

FES

- Gravity **18.7 BLG**
- ABV ---
- IBU **55**
- SRM **40**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.8 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **31.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **33.2 liter(s)**

Steps

- Temp **63 C**, Time **45 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **24.9 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **30 min** at **70C**
- Keep mash **1 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|------------------------------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale | 6 kg (61.2%) | 79 % | 6 |
| Grain | Weyermann - Chocolate Wheat | 0.5 kg (5.1%) | 74 % | 788 |
| Grain | Jęczmień palony | 0.3 kg (3.1%) | 55 % | 985 |
| Adjunct | Płatki owsiane | 0.5 kg (5.1%) | 60 % | 6 |
| Adjunct | Płatki jęczmienne | 0.5 kg (5.1%) | 60 % | 7 |
| Grain | Weyermann - Chocolate Rye | 0.5 kg (5.1%) | 20 % | 493 |
| Adjunct | płatki żytnie | 0.5 kg (5.1%) | 60 % | 5 |
| Grain | Słód wędzony torfem typu Whisky (Czechy) | 1 kg (10.2%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------|--------|--------|------------|
| Boil | magnum | 55 g | 60 min | 12 % |
| Whirlpool | Sorachi Ace | 30 g | 30 min | 10 % |
| Aroma (end of boil) | Fuggles | 35 g | 15 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 150 ml | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|------------------------------------------|--------|-----------|-----------|
| Flavor | Płatki dębowe francuskie, mocno opiekane | 50 g | Secondary | 14 day(s) |
| Flavor | Płatki dębowe SHERRY OLOROSO 50 g | 50 g | Secondary | 14 day(s) |