

## Strong FES

- Gravity **22.5 BLG**
- ABV ---
- IBU **52**
- SRM **96.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.1 liter(s)**
- Total mash volume **34.8 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **26.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (57.5%)	79 %	6
Grain	Pszeniczny	1 kg (11.5%)	85 %	4
Grain	Strzegom pszenica prażona	1 kg (11.5%)	70 %	1000
Grain	Słód karmelowy 600 Strzegom	1 kg (11.5%)	--- %	---
Grain	Carafa III	0.4 kg (4.6%)	70 %	1034
Grain	Strzegom Czekoladowy ciemny	0.3 kg (3.4%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	90 g	60 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale