

FES

- Gravity **18.7 BLG**
- ABV ---
- IBU **68**
- SRM **72**
- 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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **68 C**, Time **70 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (52.6%)	79 %	6
Grain	Płatki owsiane	1 kg (13.2%)	85 %	3
Grain	Casle Malting Whisky Nature	1 kg (13.2%)	85 %	4
Grain	Strzegom Karmel 150	0.4 kg (5.3%)	75 %	150
Grain	Special B Malt	0.4 kg (5.3%)	65.2 %	315
Grain	Strzegom Czekoladowy 1200	0.8 kg (10.5%)	68 %	1202

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	50 g	60 min	14.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Safale