

# FES

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **42**
- SRM **34.5**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **26.2 liter(s)**
- Total mash volume **33.7 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **26.2 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5.75 kg (76.9%)	79 %	6
Grain	Strzegom Monachijski typ I	0.57 kg (7.6%)	79 %	16
Grain	Strzegom Czekoladowy ciemny	0.35 kg (4.7%)	68 %	1200
Grain	Jęczmień palony	0.35 kg (4.7%)	55 %	985
Grain	Płatki owsiane	0.46 kg (6.1%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Brewers Gold	57.5 g	60 min	7.6 %
Boil	East Kent Goldings	18.4 g	5 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	25.3 g	Safale