

# FES Głogoczowski

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- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **31**
- SRM **35.6**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **28.3 liter(s)**
- Total mash volume **36.4 liter(s)**

## Steps

- Temp **65 C**, Time **45 min**
- Temp **68 C**, Time **10 min**
- Temp **72 C**, Time **5 min**
- Temp **80 C**, Time **1 min**

## Mash step by step

- Heat up **28.3 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **10 min** at **68C**
- Keep mash **5 min** at **72C**
- Keep mash **1 min** at **80C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3 kg (37%)	80 %	6
Grain	Viking Golden ale	3 kg (37%)	80 %	14
Grain	Castle Malting - Pilzneński 6-rzędowy	0.5 kg (6.2%)	80 %	5
Grain	Viking CaraBody	0.5 kg (6.2%)	75 %	8
Grain	Viking Caramel 100	0.2 kg (2.5%)	74 %	100
Grain	Viking Caramel 300	0.3 kg (3.7%)	70 %	300
Grain	Viking Czekoladowy ciemny	0.3 kg (3.7%)	67 %	1000
Grain	Jęczmień palony	0.2 kg (2.5%)	55 %	985
Grain	Strzegom Barwiący	0.1 kg (1.2%)	68 %	1400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	45 g	60 min	7.8 %
Aroma (end of boil)	East Kent Goldings	30 g	5 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	50 ml	Fermentis