

FES

- Gravity **16.8 BLG**
- ABV ---
- IBU **40**
- SRM **44.6**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

Steps

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

Mash step by step

- Heat up **9.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **6.3 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.5 kg (78.1%)	79 %	6
Grain	Strzegom Monachijski typ I	0.25 kg (7.8%)	79 %	16
Grain	Strzegom Czekoladowy ciemny	0.125 kg (3.9%)	68 %	1200
Grain	Jęczmień palony	0.125 kg (3.9%)	55 %	985
Grain	Płatki owsiane	0.2 kg (6.3%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Brewers Gold	25 g	60 min	7.6 %
Boil	East Kent Goldings	8 g	5 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale