FES v1

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **52**
- SRM **54.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **80 min**
- Evaporation rate **15 %/h**
- Boil size **15.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.5 liter(s)**

Steps

- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **12.9 liter(s)** of strike water to **74.2C**
- Add grains
- Keep mash **30 min** at **66C**
- Keep mash **30 min** at **72C**
- Sparge using **6.8 liter(s)** of **76C** water or to achieve **15.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg *(76.1%)*	80 %	4
Grain	Cara Gold Castlemalting	0.2 kg *(4.3%)*	78 %	120
Grain	Special B Malt	0.1 kg *(2.2%)*	65.2 %	315
Grain	Płatki owsiane	0.1 kg *(2.2%)*	60 %	3
Grain	Fawcett - Pszeniczny Czekoladowy	0.3 kg *(6.5%)*	73 %	1001
Grain	Jęczmień palony	0.4 kg *(8.7%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	13 %