

FES 1

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **30**
- SRM **47.5**
- 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 **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **65 C**, Time **70 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **70 min** at **65C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.2 kg (34.9%)	80 %	4
Grain	Strzegom Wiedeński	1.5 kg (23.8%)	79 %	10
Grain	Strzegom Czekoladowy 400	0.5 kg (7.9%)	68 %	400
Grain	Strzegom Pszeniczny	0.5 kg (7.9%)	81 %	6
Grain	Strzegom Jęczmień Palony	0.5 kg (7.9%)	55 %	985
Grain	Caraaroma	0.4 kg (6.3%)	78 %	400
Grain	Płatki owsiane	0.4 kg (6.3%)	85 %	3
Grain	Strzegom pszenica prażona	0.25 kg (4%)	70 %	1000
Grain	Caraamber	0.05 kg (0.8%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	12 g	60 min	8.7 %
Boil	Centennial	20 g	60 min	9.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale