

FEST

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **28**
- SRM **30.2**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **27.8 liter(s)**

Steps

- Temp **68 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **20.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	5 kg (71.9%)	80 %	16
Grain	Strzegom Monachijski typ II	1 kg (14.4%)	79 %	22
Grain	Carafa III	0.15 kg (2.2%)	70 %	1400
Grain	Czekoladowy	0.15 kg (2.2%)	60 %	788
Grain	Kawowy	0.15 kg (2.2%)	55 %	500
Grain	Karmelowy żytni Strzegom	0.5 kg (7.2%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	500 ml	---