

## FES #2

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- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **35**
- SRM **33.4**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **25 %/h**
- Boil size **34.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.9 liter(s)**
- Total mash volume **31.8 liter(s)**

### Steps

- Temp **70 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **23.9 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **70 min** at **70C**
- Keep mash **10 min** at **76C**
- Sparge using **18.2 liter(s)** of **76C** water or to achieve **34.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	6 kg (75.5%)	79 %	6
Grain	Strzegom Monachijski typ I	0.75 kg (9.4%)	79 %	16
Grain	Weyermann - Dehusked Carafa III	0.4 kg (5%)	70 %	1024
Grain	Weyermann - Chocolate Wheat	0.4 kg (5%)	74 %	788
Grain	Oats, Flaked	0.4 kg (5%)	80 %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	35 g	60 min	12.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	150 ml	Fermentis

### Notes

- do połowy dodane na zimno 50g chmielu hbc 472  
*Sep 10, 2018, 3:50 PM*