

## Wszystko do pieca, bo to FES HECA.

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **21**
- SRM **43.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **28.6 liter(s)**

### Steps

- Temp **66 C**, Time **80 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **21.5 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **80 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (49%)	80 %	4
Grain	Wędzony bukiem Viking Malt	2 kg (28%)	82 %	10
Grain	Fawcett - Brown	0.25 kg (3.5%)	72 %	180
Grain	Karmelowy Czerwony	0.3 kg (4.2%)	75 %	59
Grain	Carafa II	0.4 kg (5.6%)	70 %	812
Grain	Strzegom pszenica prażona	0.25 kg (3.5%)	70 %	1000
Grain	Jęczmień palony	0.25 kg (3.5%)	55 %	985
Grain	Black Fawcett	0.2 kg (2.8%)	50 %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %

### Yeasts

Name	Type	Form	Amount	Laboratory
S 04	Ale	Slant	200 ml	Dextera

## Notes

- Zerowanie słodów. Freestyle zawsze wychodzi dobrze.  
*Oct 25, 2018, 5:16 PM*