

## FES #2 - Browar na Wyżynie

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- Gravity **14.5 BLG**
- ABV ---
- IBU **36**
- SRM **33.1**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **24.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **24.2 liter(s)**

### Steps

- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **18.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Viking Malt	4 kg (66.1%)	80 %	6
Grain	monachijski typ II Viking Malt	0.9 kg (14.9%)	78 %	22
Grain	pszenica prażona Viking Malt	0.2 kg (3.3%)	1 %	1100
Grain	żyto prażone Viking Malt	0.2 kg (3.3%)	1 %	1100
Grain	czekoladowy ciemny Viking Malt	0.15 kg (2.5%)	1 %	900
Grain	płatki jęczmienne błyskawiczne	0.6 kg (9.9%)	70 %	1

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga (PL) - granulac	25 g	100 min	11 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Slant	300 ml	---

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Węglan wapnia	5 g	Mash	70 min
Fining	Mech irlandzki	1 g	Boil	15 min