

FES #2 - Browar na Wyżynie

- Gravity **14.5 BLG**
- ABV **6 %**
- 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 |