

FES #2

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **49**
- SRM **37.7**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

Steps

- Temp **67 C**, Time **70 min**
- Temp **67 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **10 min** at **67C**
- Keep mash **70 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 3 kg (50%) | 80 % | 4 |
| Grain | Monachijski | 1.1 kg (18.3%) | 80 % | 16 |
| Grain | owsiany | 0.7 kg (11.7%) | 80 % | 6 |
| Grain | Karmelowy ciemny | 0.3 kg (5%) | 75 % | 600 |
| Grain | Strzegom Barwiący | 0.3 kg (5%) | 68 % | 1300 |
| Grain | Jęczmień palony | 0.2 kg (3.3%) | 55 % | 1100 |
| Grain | Płatki żytnie | 0.4 kg (6.7%) | 85 % | 10 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Admiral | 30 g | 60 min | 15.7 % |
| Boil | Fuggles | 25 g | 10 min | 5.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 200 ml | Fermentis |