

#35 FES v3

- Gravity **19.3 BLG**
- ABV **8.4 %**
- IBU **52**
- SRM **73.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.6 liter(s)**
- Total mash volume **32.8 liter(s)**

Steps

- Temp **66 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Strzegom Pilzneński | 2 kg (24.4%) | 80 % | 4 |
| Grain | Viking Pale Ale malt | 3 kg (36.6%) | 80 % | 5 |
| Grain | Biscuit Malt | 0.5 kg (6.1%) | 79 % | 45 |
| Grain | Simpsons - Coffee Malt | 0.5 kg (6.1%) | 74 % | 296 |
| Grain | Carafa III | 0.2 kg (2.4%) | 70 % | 1034 |
| Grain | Strzegom Czekoladowy ciemny | 1 kg (12.2%) | 68 % | 1200 |
| Grain | Strzegom Barwiący | 0.2 kg (2.4%) | 68 % | 1300 |
| Grain | Żytni | 0.5 kg (6.1%) | 85 % | 8 |
| Grain | Jęczmień palony | 0.3 kg (3.7%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Pilgrim | 60 g | 60 min | 10.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 10 g | Safale |