

#35 FES

- Gravity **18 BLG**
- ABV ---
- IBU **45**
- SRM **40.7**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **38.4 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **32 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.9 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **38.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 8 kg (87.5%) | 80 % | 4 |
| Grain | Caraaroma | 0.5 kg (5.5%) | 78 % | 400 |
| Grain | Jęczmień palony | 0.3 kg (3.3%) | 55 % | 985 |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (2.2%) | 68 % | 1200 |
| Grain | Barley, Flaked | 0.14 kg (1.5%) | 70 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil | Magnum | 50 g | 60 min | 10.6 % |
| Aroma (end of boil) | Saaz (Czech Republic) | 58 g | 20 min | 4.4 % |

Notes

- 11 litrów + dwie laski wanilii przekrojone na pół macerowane w rumie strock 80% (15ml)
11 litrów + śliwki wędzone (ok. 220g.) z wanilią macerowane w spirytusie 70%
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