

Wędzony FES

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **54**
- SRM **41.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **13.3 liter(s)**

Steps

- Temp **64 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **9.5 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **90 min** at **64C**
- Keep mash **5 min** at **78C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 1 kg (26.3%) | 80 % | 5 |
| Grain | Viking Malt Wędzony Wiśnią | 2 kg (52.6%) | 82 % | 10 |
| Grain | Płatki owsiane | 0.3 kg (7.9%) | 85 % | 3 |
| Grain | Strzegom Karmel 600 | 0.2 kg (5.3%) | 68 % | 601 |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (5.3%) | 68 % | 1200 |
| Grain | Carafa III specjal | 0.1 kg (2.6%) | 70 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Challenger | 30 g | 60 min | 7 % |
| Boil | Columbus/Tomahawk/Zeus | 7 g | 60 min | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|----------|------------|
| Safale S-04 | Ale | Slant | 53.33 ml | Safale |