

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