

Smoked FES

- Gravity **21.6 BLG**
- ABV **9.7 %**
- IBU **48**
- SRM **71.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **8 liter(s)**
- Trub loss **10 %**
- Size with trub loss **8.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **11.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **8.4 liter(s)**
- Total mash volume **12.6 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **8.4 liter(s)** of strike water to **80C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **7.3 liter(s)** of **76C** water or to achieve **11.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Wędzony bukiem Viking Malt	2 kg (47.6%)	82 %	10
Grain	Płatki owsiane	0.7 kg (16.7%)	85 %	3
Grain	Steinbach Caraamber	0.4 kg (9.5%)	75 %	60
Grain	Castle Malting Cafe	0.5 kg (11.9%)	75.5 %	480
Grain	Viking Malt Prażone żyto	0.3 kg (7.1%)	55 %	985
Grain	Weyermann Carafa III	0.3 kg (7.1%)	70 %	1024

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---
0,8l starteru- 9blg (100g ekstraktu/ 1l wody=9blg), 3 dni na mieszadle 04.03- 14:30				

Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	1 g	Boil	5 min
Flavor	suska sechłońska	250 g	Secondary	30 day(s)