

Smoked FES

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **56**
- SRM **36.9**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **29.6 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **21.6 liter(s)** of strike water to **75.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Casle Malting Whisky Nature	3 kg (37.5%)	85 %	4
Grain	Strzegom Pilzneński	1.9 kg (23.8%)	80 %	4
Grain	Monachijski	1.1 kg (13.8%)	80 %	16
Grain	Słód owsiany Fawcett	0.7 kg (8.8%)	61 %	5
Grain	Strzegom Karmel 600	0.3 kg (3.8%)	68 %	601
Grain	Jęczmień palony	0.4 kg (5%)	55 %	985
Grain	Strzegom Barwiący	0.2 kg (2.5%)	68 %	1300
Grain	płatki żytnie	0.4 kg (5%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	50 g	60 min	14.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	22 g	---