

## FES't #2

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **30**
- SRM **31.2**
- 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (71.4%)	80 %	5
Grain	Płatki owsiane	1 kg (14.3%)	60 %	3
Grain	Strzegom Karmel 150	0.25 kg (3.6%)	75 %	150
Grain	Weyermann Specjal W	0.25 kg (3.6%)	68 %	300
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.6%)	68 %	1200
Grain	Jęczmień palony	0.25 kg (3.6%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	10.6 %
Aroma (end of boil)	Sybilla	30 g	10 min	6.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Slant	400 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	1 g	Boil	10 min
Other	Witamina C	4 g	Bottling	---