

## FES #2 z płatkami dębowymi

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- Gravity **17.7 BLG**
- ABV ---
- IBU **47**
- SRM **39.3**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (79.4%)	80 %	4
Grain	Karmelowy Czerwony	0.5 kg (7.9%)	75 %	59
Grain	Strzegom Czekoladowy 1200	0.2 kg (3.2%)	68 %	1202
Grain	Jęczmień palony	0.2 kg (3.2%)	55 %	985
Grain	Płatki owsiane	0.4 kg (6.3%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga PL	30 g	60 min	11 %
Boil	Challenger	40 g	15 min	7 %