

## FES resztkowy

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- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **57**
- SRM **51.8**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **22.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.9 liter(s) / kg**
- Mash size **24.2 liter(s)**
- Total mash volume **32.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **24.2 liter(s)** of strike water to **75.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **75C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.3 kg (27.5%)	81 %	4
Grain	Pale Ale	2 kg (23.9%)	80 %	7
Grain	Pszeniczny	1 kg (12%)	85 %	4
Grain	Monachijski	1.1 kg (13.2%)	80 %	16
Grain	Caraaroma	1.2 kg (14.4%)	78 %	400
Grain	Strzegom Czekoladowy ciemny	0.26 kg (3.1%)	68 %	1200
Grain	Weyermann - Carafa III	0.44 kg (5.3%)	70 %	1024
Grain	Jęczmień palony	0.06 kg (0.7%)	55 %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Savinjski Golding	50 g	60 min	2.9 %
Boil	Vic Secret	25 g	60 min	18.1 %
Boil	Savinjski Golding	50 g	15 min	2.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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us 05	Ale	Slant	300 ml	---
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### Extras

Type	Name	Amount	Use for	Time
Flavor	płatki dębowe amerykańskie (koniak)	50 g	Secondary	7 day(s)