

## Extra stout

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **36**
- SRM **47.2**
- 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 **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **24.1 liter(s)**
- Total mash volume **31.4 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **25 min**

### Mash step by step

- Heat up **24.1 liter(s)** of strike water to **60.3C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **40 min** at **65C**
- Keep mash **25 min** at **72C**
- Sparge using **8.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Fawcett - Maris Otter	4 kg (54.8%)	81 %	6
Grain	Monachijski typ II	1 kg (13.7%)	79 %	22
Grain	Fawcett - Pale Chocolate	0.5 kg (6.8%)	71 %	600
Grain	Fawcett - Brown	0.25 kg (3.4%)	72 %	180
Grain	Weyerman - Pszeniczny Czekoladowy	0.25 kg (3.4%)	73 %	1050
Grain	Fawcett - Red crystal	0.25 kg (3.4%)	71 %	400
Grain	Castle Cafe	0.25 kg (3.4%)	75.5 %	480
Grain	enzymatyczny	0.25 kg (3.4%)	80 %	6
Grain	Płatki owsiane	0.3 kg (4.1%)	85 %	3
Grain	Jęczmień palony	0.25 kg (3.4%)	1 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	50 min	11 %
Boil	Kent Goldings	25 g	12 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1500 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	sól	5 g	Boil	60 min
Water Agent	kreda	5 g	Boil	60 min

## Notes

- Fermentacja 1 - min 21 dni w temp. 18C  
Fermentacja 2 - min 10 dni  
*Oct 6, 2019, 9:40 AM*