

## First fes

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **43**
- SRM **34.3**
- 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 **20 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **17.1 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	5 kg (87.7%)	79 %	16
Grain	Weyermann - Dehusked Carafa III	0.1 kg (1.8%)	70 %	1400
Grain	Strzegom Czekoladowy ciemny	0.1 kg (1.8%)	68 %	1100
Grain	Brown Malt (British Chocolate)	0.2 kg (3.5%)	70 %	128
Grain	Briess - Dark Chocolate Malt	0.2 kg (3.5%)	60 %	1000
Grain	Weyermann - Carafa II	0.1 kg (1.8%)	70 %	1150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	9.1 %
Boil	Mosaic	40 g	10 min	12.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

FM13 Irlandzkie Ciemności	Ale	Slant	1000 ml	Fermentum Mobile
------------------------------	-----	-------	---------	------------------