

## #049 English Porter

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **27**
- SRM **25.2**

### Batch size

- Expected quantity of finished beer **23.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **12.5 %/h**
- Boil size **31.2 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **22.4 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **31.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Fawcett Maris Otter	2.6 kg (46.4%)	81 %	5
Grain	Viking Pale Ale malt	0.6 kg (10.7%)	80 %	5
Grain	Strzegom Karmel 300	0.8 kg (14.3%)	70 %	299
Grain	Fawcett - Brown	1 kg (17.9%)	72 %	180
Grain	Viking Wheat Malt	0.3 kg (5.4%)	83 %	5
Grain	Fawcett - Dark Crystal	0.25 kg (4.5%)	71 %	220
Grain	Viking Czekoladowy ciemny	0.05 kg (0.9%)	67 %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	35 g	70 min	5.7 %
Boil	East Kent Goldings	25 g	15 min	5.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	300 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc T	1.25 g	Boil	10 min
Other	pożywka dla drożdży Wyeast	3 g	Boil	10 min