

## Robust Porter 3.0 (Black Prince)

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **29**
- SRM **30.8**
- Style **Robust Porter**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **0 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **23.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **14.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **23.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (84%)	80 %	5
Grain	Strzegom Karmel 150	0.14 kg (2.9%)	75 %	150
Grain	Brown Malt (British Chocolate)	0.12 kg (2.5%)	70 %	128
Grain	Carafa II Special	0.25 kg (5.3%)	70 %	812
Grain	Jęczmień palony	0.25 kg (5.3%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	18 g	60 min	13.5 %
Boil	Fuggles	30 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	150 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
------	------	--------	---------	------

Fining	Mech irlandzki	3 g	Boil	10 min
Water Agent	Drożdże nieaktywne i cynk	1 g	Boil	10 min