

## #20 American Porter

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **39**
- SRM **25.7**
- Style **Robust Porter**

### Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.7 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.8 liter(s)**

### Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **17.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (83.3%)	80 %	5
Grain	Special B Malt	0.2 kg (4.8%)	65.2 %	315
Grain	Jęczmień palony	0.1 kg (2.4%)	55 %	985
Grain	Fawcett - Pszoniczny Czekoladowy	0.1 kg (2.4%)	73 %	1001
Grain	Płatki owsiane	0.2 kg (4.8%)	85 %	3
Grain	Caraaroma	0.1 kg (2.4%)	78 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	5.1 %
Boil	Fuggles	20 g	60 min	4.5 %
Aroma (end of boil)	Fuggles	10 g	10 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	100 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc	0.5 g	Boil	15 min