

# Porter Angielski

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **24**
- SRM **31.7**
- Style **Brown Porter**

## 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 **75 %**
- Liquor-to-grist ratio **4.3 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **30.7 liter(s)**

## Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **24.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **6.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (86.2%)	80 %	5
Grain	pszeniczny czekoladowy ciemny weyermann	0.2 kg (3.4%)	65 %	1050
Grain	Weyermann - Carafa II	0.2 kg (3.4%)	65 %	1150
Grain	chateau caffe	0.2 kg (3.4%)	75 %	500
Grain	Strzegom Karmel 300	0.2 kg (3.4%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	7.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis