

## Porter pomarańczowy

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **14**
- SRM **24.7**
- Style **Brown Porter**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **1.5 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **20.2 liter(s)**

### Steps

- Temp **55 C**, Time **32 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **77 C**, Time **10 min**

### Mash step by step

- Heat up **15.1 liter(s)** of strike water to **60.9C**
- Add grains
- Keep mash **32 min** at **55C**
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **77C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **29.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (69.3%)	80 %	5
Śrutownik ustawiono na 0.7				
Grain	Biscuit Malt	0.25 kg (5%)	79 %	45
Grain	Słód pszeniczny czekoladowy Weyermann®	0.25 kg (5%)	--- %	1000
Grain	Château Cafe 500 EBC Castle Malting	0.25 kg (5%)	--- %	500
Grain	Płatki owsiane	0.5 kg (9.9%)	85 %	3
Grain	Słód Special W® Weyermann	0.3 kg (5.9%)	--- %	300

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	40 g	50 min	3.7 %
Dry Hop	Lublin (Lubelski)	40 g	3 day(s)	3.7 %
Dry Hop	Amarillo	30 g	3 day(s)	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Slant	40 ml	FM

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	4 g	Mash	80 min
Flavor	Skurka słodkiej pomarańczy	30 g	Boil	1 min
Flavor	Laska wanilii macerowana w Rumie	10 g	Secondary	4 day(s)