

## #6 Brown Porter z wanilią i pomarańczą

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **19**
- SRM **22.1**
- Style **Brown Porter**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (72.9%)	80 %	5
Grain	Brown Malt (British Chocolate)	0.5 kg (10.4%)	70 %	180
Grain	Castle Cafe	0.2 kg (4.2%)	75.5 %	480
Grain	Oats, Flaked	0.4 kg (8.3%)	80 %	2
Grain	Strzegom pszenica prażona	0.2 kg (4.2%)	70 %	1000

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	15 g	60 min	9 %
Boil	Oktawia	15 g	10 min	9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirflock	5 g	Boil	10 min
Flavor	zest z pomarańczy	30 g	Boil	0 min
Flavor	sok z czterech pomarańczy	280 g	Primary	4 day(s)
Flavor	zest z pomarańczy	50 g	Secondary	4 day(s)
Flavor	laska wanilii Tahitensis	1 g	Secondary	4 day(s)