

# Porter Gryczany #1

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **35**
- SRM **27.5**
- Style **Robust 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 **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.1 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **62 C**, Time **35 min**
- Temp **72 C**, Time **45 min**

## Mash step by step

- Heat up **23.1 liter(s)** of strike water to **60.3C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **35 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	castle malting gryczany	2 kg (28.6%)	80 %	9
Grain	Maris Otter pale ale	2 kg (28.6%)	81 %	6
Grain	Weyerman - Monachijski typ II	1 kg (14.3%)	79 %	22
Grain	Weyermann - Enzymatyczny	0.25 kg (3.6%)	80 %	6
Grain	Weyermann - Melanoiden Malt	0.25 kg (3.6%)	81 %	53
Grain	Fawcett - Dark Crystal	0.25 kg (3.6%)	71 %	300
Grain	Fawcett - Pale Chocolate	0.25 kg (3.6%)	71 %	600
Grain	Weyermann - Carafa II	0.25 kg (3.6%)	70 %	837
Grain	Wheat, Torrified	0.25 kg (3.6%)	79 %	4
Grain	Płatki owsiane	0.3 kg (4.3%)	85 %	3
Grain	Płatki pszeniczne	0.2 kg (2.9%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	50 min	10 %
Boil	Challenger	20 g	15 min	7 %
Boil	East Kent Goldings	25 g	15 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	kreda	4 g	Mash	60 min
Water Agent	chlorek wapnia	6 g	Mash	60 min
Water Agent	sól	4 g	Mash	60 min

## Notes

- Łyżeczka soli, do wyśładzania kwas mlekowy 6ml  
F1 - 16 BLG  
F 2 - 6,5 BLG  
But. 5,5 BLG  
CO2 vol 2,5  
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