

# Porter Zero Waste

---

- Gravity **31.2 BLG**
- ABV **15.7 %**
- IBU **7**
- SRM **35.1**
- Style **Russian Imperial Stout**

## 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 **2 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **31 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **77.5C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **17.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5 kg (48.3%)	81 %	5
Grain	Weyermann - Pale Ale Malt	2 kg (19.3%)	85 %	7
Grain	Płatki owsiane	1 kg (9.7%)	60 %	3
Grain	Weyermann - Carapils	0.5 kg (4.8%)	78 %	4
Grain	Simpsons - Golden Naked Oats	0.5 kg (4.8%)	73 %	20
Grain	Płatki pszeniczne	0.5 kg (4.8%)	60 %	3
Grain	Special B Malt	0.25 kg (2.4%)	65.2 %	315
Grain	Weyermann - Carawheat	0.1 kg (1%)	77 %	97
Grain	Weyermann - Chocolate Rye	0.1 kg (1%)	20 %	493
Grain	Weyermann - Chocolate Wheat	0.1 kg (1%)	74 %	788
Grain	Strzegom Czekoladowy 400	0.1 kg (1%)	68 %	400
Grain	Carafa III	0.1 kg (1%)	70 %	1034

Grain	Weyermann - Carafa II	0.1 kg (1%)	70 %	837
-------	-----------------------	-------------	------	-----

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	10 g	90 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	22 g	---