

# Imperialny Stout - kooperacja

- Gravity **28.9 BLG**
- ABV **14.1 %**
- IBU **41**
- SRM **43.6**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **30.2 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**

## Mash step by step

- Heat up **20.1 liter(s)** of strike water to **80C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	7 kg (63.3%)	81 %	4
Grain	Monachijski	1 kg (9%)	80 %	16
Grain	Żytni	0.5 kg (4.5%)	85 %	8
Grain	Briess - Chocolate Malt	0.25 kg (2.3%)	60 %	690
Grain	Żytni czekoladowy	0.25 kg (2.3%)	60 %	700
Grain	Strzegom Karmel 300	0.8 kg (7.2%)	70 %	299
Grain	Weyermann - Carafa III Special	0.25 kg (2.3%)	70 %	1024
Sugar	Brown Sugar, Dark Muscovado	1 kg (9%)	100 %	99

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	50 g	60 min	11 %
Boil	lunga	20 g	30 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	300 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min