

# Irish Stout ver 1

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **34**
- SRM **33.6**
- Style **Dry Stout**

## 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 **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.5 liter(s)**
- Total mash volume **26.3 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **20.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (68.4%)	80 %	5
Grain	Karmelowy Jasny 30EBC	1 kg (17.1%)	75 %	30
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.4%)	68 %	1200
Grain	Extra black	0.35 kg (6%)	65 %	1400
Grain	płatki jęczmienne	0.3 kg (5.1%)	75 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	50 g	60 min	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	500 ml	Fermentum Mobile