

## #29 Rye Stout

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **41**
- SRM **56.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.1 liter(s)**

### Steps

- Temp **63 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16.4 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **4.1 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (42.6%)	80 %	5
Grain	Żytni	1 kg (21.3%)	85 %	8
Grain	Karmelowy Czerwony	0.5 kg (10.6%)	75 %	59
Grain	Strzegom Karmel 300	0.3 kg (6.4%)	70 %	299
Grain	Strzegom Czekoladowy jasny	0.3 kg (6.4%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.3 kg (6.4%)	68 %	1200
Grain	Strzegom pszenica prażona	0.3 kg (6.4%)	70 %	1000

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	5 g	60 min	14 %
Boil	Magnat	10 g	40 min	14 %
Boil	Magnat	10 g	20 min	14 %

### Yeasts

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale US-05	Ale	Slant	200 ml	Fermentis