

# żytni ris

- Gravity **25.1 BLG**
- ABV **11.7 %**
- IBU **56**
- SRM **57**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **120 min**
- Evaporation rate **20 %/h**
- Boil size **33.6 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **31.3 liter(s)**
- Total mash volume **43.8 liter(s)**

## Steps

- Temp **47 C**, Time **10 min**
- Temp **72 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **31.3 liter(s)** of strike water to **52.4C**
- Add grains
- Keep mash **10 min** at **47C**
- Keep mash **90 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **33.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (32%)	81 %	4
Grain	Enzymatyczny Viking Malt	1 kg (8%)	76 %	7
Grain	Żytni	4 kg (32%)	85 %	8
Grain	Karmelowy żytni Strzegom	2 kg (16%)	75 %	150
Grain	castel malting - Chocolate Wheat	1.5 kg (12%)	74 %	788

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	80 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	300 ml	Danstar