

# RYE IPA

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **69**
- SRM **5.1**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **18.7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **87.8 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **10 min** at **87.8C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **23.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2 kg (36.4%)	85 %	8
Grain	Viking Pilsner malt	0.5 kg (9.1%)	82 %	4
Grain	Viking Pale Ale malt	3 kg (54.5%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	16.8 %
Boil	Columbus/Tomahawk/Zeus	15 g	45 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	15.5 %
Aroma (end of boil)	Callista	20 g	10 min	3.9 %
Dry Hop	Callista	80 g	4 day(s)	3.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis