

## RYE IPA v3 #50

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **66**
- SRM **7**
- Style **Rye IPA**

### Batch size

- Expected quantity of finished beer **21.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **79.1 %**
- Liquor-to-grist ratio **3.23 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26.1 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking - pilzniejszy	4.35 kg (70.4%)	80 %	4
Grain	Viking - Rye Malt	1.2 kg (19.4%)	81 %	8
Grain	Chateau- Crystal	0.23 kg (3.7%)	78 %	150
Grain	Bestmalz - Caramel Pils	0.2 kg (3.2%)	75 %	5
Grain	Bestmalz - pszeniczny	0.2 kg (3.2%)	82 %	4.5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Topaz	25 g	60 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	25 g	15 min	12.5 %
Aroma (end of boil)	Centennial	25 g	10 min	9.4 %
Aroma (end of boil)	Simcoe	25 g	5 min	13.1 %
Aroma (end of boil)	Citra	25 g	1 min	13.6 %
Dry Hop	Simcoe	50 g	4 day(s)	13.1 %
Dry Hop	Amarillo	50 g	4 day(s)	8.8 %
Dry Hop	Centennial	50 g	4 day(s)	9.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	190 ml	Fermentum Mobile
gęstwa z 14.9.2017 - 1 pokolenie				

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	5 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	4.47 g	Mash	---
Water Agent	chlorek wapnia [ml]	1.72 g	Mash	---
Water Agent	sól epsom	3 g	Mash	---
Fining	mech irlandzki	3 g	Boil	5 min