

# Rye Pale Ale

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **46**
- SRM **4.7**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

## Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) US	3.5 kg (64.8%)	79 %	4
Grain	Żytni	1 kg (18.5%)	85 %	8
Grain	Płatki pszeniczne	0.5 kg (9.3%)	85 %	3
Grain	Monachijski	0.2 kg (3.7%)	80 %	16
Grain	Strzegom Karmel 30	0.2 kg (3.7%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	13 %
Whirlpool	Citra	30 g	30 min	12 %
Whirlpool	Amarillo	30 g	30 min	9.5 %
Dry Hop	Citra	20 g	1 day(s)	12 %
Dry Hop	Amarillo	70 g	1 day(s)	9.5 %