

# 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 %      |