

# Rye pale ale

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **38**
- SRM **7.1**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **13.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **8.9 liter(s)**
- Total mash volume **12.3 liter(s)**

## Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **8.9 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **13.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (58.3%)	80 %	4
Grain	Żytni	0.8 kg (23.3%)	85 %	8
Grain	Strzegom Wiedeński	0.6 kg (17.5%)	79 %	10
Grain	Caraaroma	0.03 kg (0.9%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	15 g	60 min	13.5 %