

# Pale Ale

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- Gravity **12.3 BLG**
- ABV ---
- IBU **31**
- SRM **17.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.6 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **75 C**, Time **10 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **75C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Pale Ale                   | 4 kg (83.3%)   | 80 %  | 4   |
| Grain | Strzegom Monachijski typ I | 0.5 kg (10.4%) | 79 %  | 16  |
| Grain | Karmelowy ciemny           | 0.3 kg (6.3%)  | 71 %  | 500 |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Mandarina Bavaria | 30 g   | 60 min | 8 %        |
| Aroma (end of boil) | Mandarina Bavaria | 40 g   | 5 min  | 8 %        |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |