# Pale Ale

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **4.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **27 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **25 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27 liter(s)** of wort

## Fermentables

| Type | Name | Amount | Yield | EBC |
|---|---|---|---|---|
| Grain | Viking Pale Ale malt zero | 5 kg *(100%)* | 80 % | 6 |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---|---|---|---|
| Boil | Iunga | 30 g | 60 min | 9.2 % |
| Whirlpool | Lublin (Lubelski) | 30 g | 0 min | 5.6 % |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|---|---|---|---|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |