

# Pale ALE USA

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **8.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **18.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount       | Yield | EBC |
|-------|-----------------------|--------------|-------|-----|
| Grain | Strzegom Pilznieński  | 4.5 kg (72%) | 80 %  | 4   |
| Grain | Pszenica niesłodowana | 1 kg (16%)   | 75 %  | 3   |
| Grain | Viking Wędzony torfem | 0.5 kg (8%)  | 81 %  | 7   |
| Grain | Strzegom Karmel 300   | 0.25 kg (4%) | 70 %  | 299 |

## Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Belma      | 30 g   | 60 min | 9.4 %      |
| Aroma (end of boil) | Belma      | 30 g   | 10 min | 9.4 %      |
| Aroma (end of boil) | Willamette | 15 g   | 5 min  | 5 %        |

## Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 500 ml | ---        |