

# APA

- Gravity **13.3 BLG**
- ABV ---
- IBU **95**
- SRM **7.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **40 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **30 min** at **66C**
- Keep mash **40 min** at **72C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount       | Yield  | EBC |
|-------|------------------------|--------------|--------|-----|
| Grain | Briess - Pale Ale Malt | 3 kg (60%)   | 80 %   | 7   |
| Grain | Briess - Pilsen Malt   | 1 kg (20%)   | 80.5 % | 2   |
| Grain | Chit Malt              | 0.5 kg (10%) | 50 %   | 2   |
| Grain | Briess - Victory Malt  | 0.5 kg (10%) | 75 %   | 20  |

## Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | new port | 20 g   | 60 min | 10.7 %     |
| Boil                | Cascade  | 20 g   | 60 min | 6 %        |
| Boil                | new port | 30 g   | 30 min | 10.7 %     |
| Aroma (end of boil) | Zythos   | 50 g   | 5 min  | 11 %       |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11 g   | Mangrove Jack's |