

# APA

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **82**
- SRM **4.1**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **67 C**, Time **15 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **67C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

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

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Warrior | 25 g   | 60 min | 15.5 %     |
| Boil                | Polaris | 10 g   | 15 min | 19 %       |
| Boil                | Warrior | 10 g   | 10 min | 15.5 %     |
| Boil                | Polaris | 15 g   | 10 min | 19 %       |
| Boil                | Polaris | 15 g   | 5 min  | 19 %       |
| Boil                | Warrior | 15 g   | 5 min  | 15.5 %     |
| Aroma (end of boil) | Polaris | 10 g   | 0 min  | 19 %       |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11.5 g | Mangrove Jack's |