

# APA

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **50**
- SRM **5.6**
- 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 **10 %/h**
- Boil size **27.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**

## Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

## Fermentables

| Type  | Name                               | Amount        | Yield | EBC |
|-------|------------------------------------|---------------|-------|-----|
| Grain | Pale Ale Mari Otter Extra          | 6 kg (89.6%)  | --- % | 4   |
| Grain | Steinbach Wiedeński                | 0.3 kg (4.5%) | 79 %  | 10  |
| Grain | Grodziski pszeniczny wędzony dębem | 0.3 kg (4.5%) | 80 %  | 3   |
| Grain | Crystal Light                      | 0.1 kg (1.5%) | 72 %  | 170 |

## Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Citra    | 40 g   | 60 min   | 12 %       |
| Boil                | Amarillo | 15 g   | 15 min   | 9.5 %      |
| Aroma (end of boil) | Cascade  | 20 g   | 0 min    | 6 %        |
| Dry Hop             | Amarillo | 10 g   | 7 day(s) | 9.5 %      |
| Dry Hop             | Cascade  | 10 g   | 7 day(s) | 6 %        |
| Dry Hop             | Cascade  | 15 g   | 3 day(s) | 6 %        |
| Dry Hop             | Citra    | 10 g   | 3 day(s) | 12 %       |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                                   |     |     |      |                 |
|-----------------------------------|-----|-----|------|-----------------|
| Mangrove Jack's<br>M15 Empire Ale | Ale | Dry | 10 g | Mangrove Jack's |
|-----------------------------------|-----|-----|------|-----------------|