

# cascade single hop APA

- Gravity **13.9 BLG**
- ABV ---
- IBU **42**
- SRM ---
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **72 C**, Time **30 min**
- Temp **64 C**, Time **30 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name             | Amount     | Yield | EBC |
|-------|------------------|------------|-------|-----|
| Grain | słód pale ale    | 2 kg (50%) | --- % | --- |
| Grain | słód wiedeński   | 1 kg (25%) | --- % | --- |
| Grain | słód monachijski | 1 kg (25%) | --- % | --- |

## Hops

| Use for             | Name    | Amount | Time     | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil                | Cascade | 40 g   | 60 min   | 6 %        |
| Boil                | Cascade | 10 g   | 30 min   | 6 %        |
| Boil                | Cascade | 10 g   | 15 min   | 6 %        |
| Boil                | Cascade | 25 g   | 10 min   | 6 %        |
| Aroma (end of boil) | Cascade | 10 g   | 5 min    | 6 %        |
| Aroma (end of boil) | Cascade | 10 g   | 1 min    | 6 %        |
| Dry Hop             | Cascade | 25 g   | 7 day(s) | 6 %        |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 10 g   | Mangrove Jack's |