

# APA SINGLE HOP - CASCADE

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **46**
- SRM **6.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **7 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **7 min** at **78C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount          | Yield | EBC |
|-------|-----------------------------|-----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt   | 3.25 kg (59.1%) | 85 %  | 6.5 |
| Grain | Weyermann pszeniczny jasny  | 0.75 kg (13.6%) | 80 %  | 4   |
| Grain | Carahell                    | 0.25 kg (4.5%)  | 77 %  | 26  |
| Grain | Strzegom Monachijski typ II | 1.25 kg (22.7%) | 79 %  | 22  |

## Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Cascade | 20 g   | 60 min   | 8.1 %      |
| Boil    | Cascade | 25 g   | 60 min   | 4.5 %      |
| Boil    | Cascade | 25 g   | 30 min   | 4.5 %      |
| Boil    | Cascade | 15 g   | 20 min   | 8.1 %      |
| Boil    | Cascade | 15 g   | 10 min   | 8.1 %      |
| Dry Hop | Cascade | 50 g   | 5 day(s) | 8.1 %      |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |

## Extras

| Type        | Name            | Amount | Use for | Time   |
|-------------|-----------------|--------|---------|--------|
| Water Agent | Gips piwowarski | 10 g   | Mash    | 70 min |