

# APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **62**
- SRM **3.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (92.6%)  | 80 %  | 5   |
| Grain | Platki owsiane       | 0.4 kg (7.4%) | 60 %  | 3   |

## Hops

| Use for             | Name   | Amount | Time     | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Boil                | lunga  | 30 g   | 60 min   | 11 %       |
| Aroma (end of boil) | Citra  | 25 g   | 5 min    | 12 %       |
| Whirlpool           | Citra  | 25 g   | 30 min   | 12 %       |
| Whirlpool           | Simcoe | 25 g   | 30 min   | 13.2 %     |
| Dry Hop             | Citra  | 50 g   | 3 day(s) | 12 %       |
| Dry Hop             | Simcoe | 25 g   | 3 day(s) | 13.2 %     |

## Yeasts

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US-05 | Ale  | Slant | 200 ml | fermentis  |

## Extras

| Type        | Name           | Amount | Use for | Time   |
|-------------|----------------|--------|---------|--------|
| Water Agent | Gips           | 9 g    | Mash    | 60 min |
| Water Agent | Chlorek Wapnia | 3 g    | Mash    | 60 min |