

# APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **47**
- SRM **4.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.8 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **66 C**, Time **75 min**
- Temp **76 C**, Time **15 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **15 min** at **76C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount       | Yield  | EBC |
|-------|----------------------|--------------|--------|-----|
| Grain | Pale Ale optima      | 4.5 kg (90%) | 81.6 % | 7   |
| Grain | pszeniczny Malteurop | 0.25 kg (5%) | 80 %   | 6   |
| Grain | Weyermann - Carapils | 0.15 kg (3%) | 78 %   | 4   |
| Grain | Słód Carahell (R)    | 0.1 kg (2%)  | 75 %   | 25  |

## Hops

| Use for    | Name       | Amount | Time     | Alpha acid |
|------------|------------|--------|----------|------------|
| First Wort | lunga      | 10 g   | 60 min   | 12.8 %     |
| Boil       | Citra      | 10 g   | 20 min   | 12 %       |
| Boil       | Centennial | 15 g   | 20 min   | 9.7 %      |
| Boil       | Amarillo   | 15 g   | 20 min   | 9.5 %      |
| Boil       | Citra      | 10 g   | 7 min    | 12 %       |
| Boil       | Centennial | 15 g   | 7 min    | 9.7 %      |
| Boil       | Amarillo   | 15 g   | 7 min    | 9.5 %      |
| Dry Hop    | Citra      | 20 g   | 4 day(s) | 12 %       |
| Dry Hop    | Amarillo   | 20 g   | 4 day(s) | 9.5 %      |
| Dry Hop    | Centennial | 20 g   | 4 day(s) | 9.7 %      |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory         |
|----------------------|------|-------|--------|--------------------|
| FM52 Amerykański Sen | Ale  | Slant | 150 ml | gestwa po warce 26 |

## Extras

| Type   | Name        | Amount | Use for | Time   |
|--------|-------------|--------|---------|--------|
| Fining | Whirlfloc T | 1 g    | Boil    | 15 min |