

# APA

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **5.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **58 C**, Time **10 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **30 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount        | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Pale Ale/Pils Crisp        | 6 kg (90.9%)  | 81 %  | 6   |
| Grain | Strzegom Monachijski typ I | 0.5 kg (7.6%) | 81 %  | 16  |
| Grain | KARMELOWY CRYSTAL          | 0.1 kg (1.5%) | 80 %  | 150 |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 40 min   | 16.6 %     |
| Aroma (end of boil) | Cascade PL             | 10 g   | 20 min   | 6.6 %      |
| Aroma (end of boil) | Chinook PL             | 20 g   | 15 min   | 7.6 %      |
| Aroma (end of boil) | Equinox                | 15 g   | 10 min   | 13.1 %     |
| Aroma (end of boil) | Citra                  | 15 g   | 7 min    | 12 %       |
| Dry Hop             | Citra                  | 30 g   | 7 day(s) | 12 %       |

## Yeasts

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

|       |     |     |      |     |
|-------|-----|-----|------|-----|
| US-05 | Ale | Dry | 11 g | --- |
|-------|-----|-----|------|-----|