

APA 1.0

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **33**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **20.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **1 min** at **78C**
- Sparge using **24.2 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Pale Malt (2 Row) Bel | 6 kg (87%) | 80 % | 6 |
| Grain | Pszeniczny | 0.4 kg (5.8%) | 85 % | 4 |
| Grain | Strzegom Pilznieński | 0.5 kg (7.2%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|--------|--------|----------|------------|
| Boil | Mosaic | 20 g | 30 min | 12 % |
| Boil | Mosaic | 15 g | 15 min | 12 % |
| Aroma (end of boil) | Mosaic | 15 g | 15 min | 12 % |
| Chmiel dodać po wyłączeniu palnika. | | | | |
| Whirlpool | Citra | 20 g | 15 min | 13.5 % |
| Chmiel dodać przy temperaturze 90 stopni. Estymacja izomeryzacji wciąż na poziomie 5-15%. | | | | |
| Whirlpool | Citra | 30 g | 0 min | 13.5 % |
| Chmiel dodać przy temperaturze 80 stopni. Do końca chłodzenia. Około 20 minut. | | | | |
| Dry Hop | Citra | 50 g | 3 day(s) | 13.5 % |
| Dry Hop | Mosaic | 100 g | 3 day(s) | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|-------------|-------------|---------------|-------------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 10 g | Mangrove Jack's |
| FM54 Gorączka kalifornijska | Ale | Liquid | 30 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|----------------|---------------|----------------|-------------|
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |