

# APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **61**
- SRM **3.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **45 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt  | 5 kg (90.9%)  | 82 %  | 4   |
| Grain | Weyermann - Carapils | 0.5 kg (9.1%) | 78 %  | 4   |

## Hops

| Use for   | Name                   | Amount | Time     | Alpha acid |
|-----------|------------------------|--------|----------|------------|
| Boil      | Columbus/Tomahawk/Zeus | 25 g   | 60 min   | 15.5 %     |
| Whirlpool | Mosaic Cryo            | 25 g   | 15 min   | 21.3 %     |
| Whirlpool | Idaho 7 Cryo           | 25 g   | 15 min   | 20.1 %     |
| Dry Hop   | Mosaic Cryo            | 70 g   | 4 day(s) | 21.3 %     |
| Dry Hop   | Idaho 7 Cryo           | 70 g   | 4 day(s) | 20.1 %     |

## Yeasts

| Name                | Type | Form  | Amount | Laboratory |
|---------------------|------|-------|--------|------------|
| Lutra OYL-071       | Ale  | Dry   | 11 g   | Omega      |
| Blend TorbbedGarden | Ale  | Slant | 50 ml  | ---        |

## Extras

| Type        | Name             | Amount | Use for | Time   |
|-------------|------------------|--------|---------|--------|
| Water Agent | Gips piwowarski  | 11 g   | Mash    | 60 min |
| Water Agent | Epsom            | 2 g    | Mash    | 60 min |
| Water Agent | CaCl             | 3 g    | Mash    | 60 min |
| Water Agent | Kwas mlekowy 80% | 5 g    | Mash    | 60 min |
| Water Agent | Enzym            | 2 g    | Mash    | 60 min |
| Water Agent | Whirflock        | 4 g    | Boil    | 10 min |

## Notes

- Profil wody (Chmielowy):Ca-98.7/Mg-9.1/Na-4/Cl-42.6/SO4-196.6/HCO3-41/  
2ml enzymu do zacierania,  
Kwas mlekowy do korekty pH zacieru (5.3) i pH brzeczki nastawnej (5.1)  
Whirflock na ostatnie 10 minut gotowania, cała tabletk.  
*May 11, 2023, 9:52 PM*