

# Usapils

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **33**
- SRM **4.7**
- Style **Classic American Pilsner**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.1 liter(s)**

## Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **18.7 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount         | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Pilzneński            | 4.3 kg (80.4%) | 81 %  | 4   |
| Grain | Weyermann - Carapils  | 0.25 kg (4.7%) | 78 %  | 4   |
| Grain | Weyermann - Caraamber | 0.1 kg (1.9%)  | 75 %  | 65  |
| Grain | Monachijski           | 0.5 kg (9.3%)  | 80 %  | 16  |
| Grain | Viking melanoidynowy  | 0.1 kg (1.9%)  | 75 %  | 60  |
| Grain | Rice, Flaked          | 0.1 kg (1.9%)  | 70 %  | 2   |

## Hops

| Use for             | Name   | Amount | Time     | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Boil                | Waimea | 6 g    | 40 min   | 17 %       |
| Aroma (end of boil) | Citra  | 30 g   | 5 min    | 13.8 %     |
| Dry Hop             | Citra  | 20 g   | 4 day(s) | 12 %       |
| Aroma (end of boil) | Waimea | 30 g   | 10 min   | 17 %       |

## Yeasts

| <b>Name</b>                           | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|---------------------------------------|-------------|-------------|---------------|-------------------|
| Mangrove Jack's<br>M84 Bohemian Lager | Lager       | Slant       | 100 ml        | Man               |