

# Kwas

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **34**
- SRM **3.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **72 C**, Time **60 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name          | Amount         | Yield | EBC |
|-------|---------------|----------------|-------|-----|
| Grain | Pilzneński    | 4 kg (57.1%)   | 81 %  | 4   |
| Grain | Pszeniczny    | 2.5 kg (35.7%) | 85 %  | 4   |
| Grain | Płatki żytnie | 0.5 kg (7.1%)  | 85 %  | 3   |

## Hops

| Use for             | Name    | Amount | Time     | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil                | Cascade | 20 g   | 30 min   | 8.3 %      |
| Aroma (end of boil) | Citra   | 50 g   | 5 min    | 13.1 %     |
| Aroma (end of boil) | Mosaic  | 50 g   | 5 min    | 12.6 %     |
| Aroma (end of boil) | Cascade | 30 g   | 5 min    | 6 %        |
| Dry Hop             | Mosaic  | 50 g   | 2 day(s) | 12.6 %     |
| Dry Hop             | Citra   | 50 g   | 2 day(s) | 13.1 %     |

## Yeasts

| Name            | Type | Form    | Amount | Laboratory                           |
|-----------------|------|---------|--------|--------------------------------------|
| us-05           | Ale  | Dry     | 11 g   | ---                                  |
| Lacto Plantarum | Ale  | Culture | 1 g    | 1/3 opakowania, 3 dni/ temp pokojowa |