

# Brut'al

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **6**
- SRM **3.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.9 liter(s)**
- Total mash volume **10.1 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **7.9 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

## Fermentables

| Type  | Name             | Amount          | Yield  | EBC |
|-------|------------------|-----------------|--------|-----|
| Grain | Pilzneński IREKS | 1.75 kg (72.9%) | 81 %   | 4   |
| Grain | Płatki ryżowe    | 0.25 kg (10.4%) | 78.3 % | 2   |
| Grain | Płatki owsiane   | 0.25 kg (10.4%) | 85 %   | 3   |
| Sugar | Cukier biały     | 0.15 kg (6.3%)  | 80 %   | 2   |

## Hops

| Use for             | Name   | Amount | Time     | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Aroma (end of boil) | Mosaic | 15 g   | 5 min    | 10 %       |
| Aroma (end of boil) | Citra  | 15 g   | 0 min    | 10 %       |
| Dry Hop             | Citra  | 35 g   | 3 day(s) | 13 %       |
| Dry Hop             | Galaxy | 45 g   | 3 day(s) | 15 %       |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| Us-05 | Ale  | Dry  | 5.75 g | Fermentis  |

## Extras

| Type  | Name         | Amount | Use for | Time      |
|-------|--------------|--------|---------|-----------|
| Other | Glukoamylaza | 2.5 g  | Primary | 20 day(s) |