

# Polskie

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **63**
- SRM **5.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **14.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name         | Amount         | Yield | EBC |
|-------|--------------|----------------|-------|-----|
| Grain | Pilzneński   | 4 kg (85.1%)   | 81 %  | 4   |
| Grain | Cara Crystal | 0.2 kg (4.3%)  | 80 %  | 150 |
| Grain | Pszoniczny   | 0.5 kg (10.6%) | 85 %  | 4   |

## Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Marynka  | 20 g   | 60 min   | 10 %       |
| Boil                | Marynka  | 40 g   | 30 min   | 10 %       |
| Aroma (end of boil) | Izabella | 30 g   | 10 min   | 5.1 %      |
| Dry Hop             | Oktawia  | 30 g   | 7 day(s) | 7.1 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Fermentis  |