

# Polskie Ale

- Gravity **11.9 BLG**
- ABV ---
- IBU **34**
- SRM **9.7**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **30 liter(s)**

## Steps

- Temp **66 C**, Time **90 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **77.5C**
- Add grains
- Keep mash **90 min** at **66C**
- Sparge using **40.6 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount      | Yield | EBC |
|-------|---------------------|-------------|-------|-----|
| Grain | Pszeniczny          | 1 kg (10%)  | 85 %  | 4   |
| Grain | Strzegom Pilzneński | 8 kg (80%)  | 80 %  | 4   |
| Grain | Optima Karmel 150   | 0.5 kg (5%) | 80 %  | 150 |
| Grain | Optima Karmel 30    | 0.5 kg (5%) | 80 %  | 30  |

## Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil                | Magnum | 33 g   | 60 min | 11.5 %     |
| Boil                | Perle  | 50 g   | 15 min | 7 %        |
| Aroma (end of boil) | Perle  | 50 g   | 0 min  | 7 %        |

## Yeasts

| Name                                 | Type | Form  | Amount | Laboratory      |
|--------------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M54 California Lager | Ale  | Slant | 300 ml | Mangrove Jack's |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech Irlandzki | 10 g   | Boil    | 10 min |