

# ALE ŻYTO

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **27**
- SRM **5.6**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **19 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **25 min**

## Mash step by step

- Heat up **19 liter(s)** of strike water to **70.9C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **25 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount       | Yield | EBC |
|-------|---------------------------|--------------|-------|-----|
| Grain | Pilzneński                | 1.5 kg (30%) | 81 %  | 4   |
| Grain | Żytni                     | 1.5 kg (30%) | 85 %  | 8   |
| Grain | Pszeniczny                | 1 kg (20%)   | 85 %  | 4   |
| Grain | Simpsons - Caramalt Light | 1 kg (20%)   | 76 %  | 26  |

## Hops

| Use for             | Name             | Amount | Time   | Alpha acid |
|---------------------|------------------|--------|--------|------------|
| Boil                | domowy 2022      | 30 g   | 60 min | 3 %        |
| Aroma (end of boil) | domowy 2022/2023 | 30 g   | 30 min | 3 %        |
| Aroma (end of boil) | domowy 2022/2023 | 30 g   | 15 min | 3 %        |
| Aroma (end of boil) | domowy 2022/2023 | 30 g   | 5 min  | 3 %        |
| Whirlpool           | domowy 2022/2023 | 50 g   | 15 min | 3 %        |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us 05 | Ale  | Dry  | 11 g   | ---        |