

# Piwo Żytnie

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **15**
- SRM **7.2**
- Style **Roggenbier**

## 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 **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount          | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Żytni                      | 3.2 kg (61.5%)  | 85 %  | 8   |
| Grain | Strzegom Monachijski typ I | 1 kg (19.2%)    | 79 %  | 16  |
| Grain | Pilzneński                 | 0.75 kg (14.4%) | 81 %  | 4   |
| Grain | Caramunich® typ I          | 0.25 kg (4.8%)  | 73 %  | 80  |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Marynka | 10 g   | 60 min | 10 %       |
| Aroma (end of boil) | Calista | 30 g   | 10 min | 3.9 %      |
| Whirlpool           | Calista | 20 g   | 1 min  | 3.9 %      |

## Yeasts

| Name          | Type  | Form  | Amount | Laboratory |
|---------------|-------|-------|--------|------------|
| Safbrew WB-06 | Wheat | Slant | 300 ml | ---        |