

# Żytni lager hybrydowy

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **19**
- SRM **3.9**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **62 C**, Time **50 min**
- Temp **70 C**, Time **20 min**

## Mash step by step

- Heat up **19.3 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **20 min** at **70C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **32.9 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 3.5 kg (63.6%) | 80 %  | 4   |
| Grain | Żytni               | 1.5 kg (27.3%) | 85 %  | 8   |
| Grain | Strzegom Wiedeński  | 0.5 kg (9.1%)  | 79 %  | 10  |

## Hops

| Use for   | Name       | Amount | Time     | Alpha acid |
|-----------|------------|--------|----------|------------|
| Boil      | Książęcy   | 25 g   | 65 min   | 8.3 %      |
| Dry Hop   | Książęcy   | 25 g   | 0 day(s) | 8.3 %      |
| Whirlpool | Cascade PL | 100 g  | 0 min    | 7.3 %      |

## Yeasts

| Name       | Type  | Form | Amount | Laboratory |
|------------|-------|------|--------|------------|
| nova lager | Lager | Dry  | 10 g   | ---        |