

# Żytni stout

- Gravity **13.9 BLG**
- ABV ---
- IBU **32**
- SRM **40**
- Style **Oatmeal Stout**

## 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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **37 C**, Time **20 min**
- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

## Mash step by step

- Heat up **14.1 liter(s)** of strike water to **39.8C**
- Add grains
- Keep mash **20 min** at **37C**
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- 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 | Weyermann - Pale Ale Malt | 3 kg (63.8%)   | 85 %   | 7    |
| Grain | Rye, Flaked               | 1.2 kg (25.5%) | 78.3 % | 4    |
| Grain | Jęczmień palony           | 0.25 kg (5.3%) | 55 %   | 985  |
| Grain | Carafa III                | 0.25 kg (5.3%) | 70 %   | 1034 |

## Hops

| Use for | Name          | Amount | Time   | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil    | Kent Goldings | 50 g   | 60 min | 5.5 %      |

## Yeasts

| Name                 | Type | Form | Amount | Laboratory |
|----------------------|------|------|--------|------------|
| Danstar - Nottingham | Ale  | Dry  | 10 g   | Danstar    |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 5 g    | Boil    | 15 min |