

## żytni stout

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **25**
- SRM **35.2**
- Style **Oatmeal Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 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 **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Suflet Pale Ale malt             | 2.5 kg (41.7%) | 80 %  | 5   |
| Grain | Żytni                            | 2 kg (33.3%)   | 85 %  | 8   |
| Grain | Karmelowy żytni Strzegom         | 0.5 kg (8.3%)  | 75 %  | 150 |
| Grain | Słód Żytni Czekoladowy Weyermann | 1 kg (16.7%)   | 75 %  | 700 |

### Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 25 g   | 50 min | 11 %       |

### Extras

| Type        | Name            | Amount  | Use for | Time   |
|-------------|-----------------|---------|---------|--------|
| Water Agent | woda z Biedry   | 21000 g | Mash    | 90 min |
| Water Agent | gips piwowarski | 5 g     | Mash    | 90 min |
| Water Agent | kwas            | 4 g     | Mash    | 90 min |