

## Z żytem

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **47**
- SRM **3.6**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

### Fermentables

| Type  | Name       | Amount     | Yield | EBC |
|-------|------------|------------|-------|-----|
| Grain | Pilzneński | 4 kg (80%) | 81 %  | 4   |
| Grain | Żytni      | 1 kg (20%) | 85 %  | 8   |

### Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Equinox | 20 g   | 60 min   | 14.5 %     |
| Boil    | Equinox | 20 g   | 20 min   | 14.5 %     |
| Boil    | Equinox | 10 g   | 5 min    | 14.5 %     |
| Dry Hop | Citra   | 30 g   | 4 day(s) | 12 %       |
| Dry Hop | Azacca  | 30 g   | 4 day(s) | 11 %       |

### Yeasts

| Name                                  | Type | Form | Amount | Laboratory |
|---------------------------------------|------|------|--------|------------|
| Gozdawa Belgian Fruit Spicy Ale Yeast | Ale  | Dry  | 10 g   | Gozdawa    |