

Żytnie

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **24**
- SRM **15.1**

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 **12 %/h**
- Boil size **25.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5.3 liter(s) / kg**
- Mash size **31.8 liter(s)**
- Total mash volume **37.8 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **31.8 liter(s)** of strike water to **66C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **10 min** at **78C**
- Sparge using **liter(s)** of **76C** water or to achieve **25.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Żytni | 2 kg (33.3%) | 85 % | 8 |
| Grain | Strzegom Pilzneński | 2.5 kg (41.7%) | 80 % | 4 |
| Grain | caramel aromatic | 1 kg (16.7%) | 77 % | 180 |
| Grain | wiedeński | 0.5 kg (8.3%) | --- % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Cascade PL | 25 g | 90 min | 5.2 % |
| Boil | Cascade PL | 25 g | 30 min | 5.2 % |
| Aroma (end of boil) | Cascade PL | 25 g | 0 min | 5.2 % |