

red rye ale

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **23**
- SRM **8.9**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **67 C**, Time **70 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **2 min** at **76C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **29.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | piłżeński | 3 kg (54.5%) | 85 % | 5 |
| Grain | Żytni | 2 kg (36.4%) | 85 % | 8 |
| Grain | Strzegom Karmel 150 | 0.5 kg (9.1%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|--------|------------|
| Boil | Marynka | 20 g | 60 min | 7.5 % |
| Boil | Marynka | 20 g | 20 min | 7.5 % |
| Whirlpool | Marynka | 10 g | 0 min | 7.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------|------|------|--------|------------|
| Gozdawa Pure Ale Yeast 7 | Ale | Dry | 10 g | --- |