

Rye Bread Ale #1

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **27**
- SRM **6.3**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **65 C**, Time **90 min**
- Temp **73 C**, Time **20 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **90 min** at **65C**
- Keep mash **20 min** at **73C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (41.7%)	82 %	4
Grain	Viking Pale Ale malt	1 kg (20.8%)	80 %	5
Grain	Chleb żytni	1.5 kg (31.3%)	70 %	30
Grain	Płatki pszeniczne	0.3 kg (6.3%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	60 min	8.5 %
Aroma (end of boil)	Challenger	100 g	0 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London ESB Ale	Ale	Slant	200 ml	Wyeast Labs