

American Rye (Żytnie) z PK

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **4.7**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **20 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	2.4 kg (46.2%)	81 %	5
Grain	Żytni	1.2 kg (23.1%)	85 %	8
Grain	Strzegom Wiedeński	0.35 kg (6.7%)	79 %	10
Grain	Karmelowy Jasny 30EBC	0.25 kg (4.8%)	75 %	30
Grain	Weyermann - Pale Ale Malt	1 kg (19.2%)	85 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	13.5 %
Boil	Enigma (AUS)	10 g	30 min	17.2 %
Boil	Magnum	10 g	15 min	13.5 %
Aroma (end of boil)	Enigma (AUS)	10 g	0 min	17.2 %
Dry Hop	Enigma (AUS)	30 g	0 day(s)	17.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis us-05	Wine	Dry	23 g	Fermicru