

## #220 Amerykańskie żytnie

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **15**
- SRM **4.5**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **7 %**
- Size with trub loss **21.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **23.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.38 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.5 liter(s)**

### Steps

- Temp **66 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **23.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter pale ale	1.5 kg (33.7%)	80 %	7
Grain	Viking Malt żytni	1.4 kg (31.5%)	85 %	8
Grain	Viking Malt piłznieński	1.35 kg (30.3%)	80 %	4
Grain	Viking Malt pszeniczny	0.2 kg (4.5%)	81 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka PL 2023	15 g	60 min	7.8 %
Aroma (end of boil)	Cascade US 2023	25 g	1 min	7.8 %
Aroma (end of boil)	Elani US 2023	25 g	1 min	5.7 %
Dry Hop	Cascade US 2023	25 g	7 day(s)	7.8 %
Dry Hop	Elani US 2023	25 g	7 day(s)	5.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM601 Senalio mieles	Ale	Liquid	40 ml	Fermentum Mobile