

# Książniczkowe 2.0

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **75**
- SRM **4.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **6 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.1 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (90.9%)	80 %	6.5
Grain	Płatki owsiane	0.25 kg (4.5%)	85 %	3
Grain	Płatki pszeniczne	0.25 kg (4.5%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Warrior	10 g	90 min	15.1 %
Boil	Warrior	30 g	60 min	15.1 %
Aroma (end of boil)	mosaic	35 g	5 min	13.2 %
Aroma (end of boil)	citra	35 g	5 min	12.5 %
Whirlpool	mosaic	35 g	30 min	1 %
Whirlpool	citra	35 g	30 min	1 %
Dry Hop	mosaic	30 g	3 day(s)	13.2 %
Dry Hop	citra	30 g	3 day(s)	12.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Dry	11.5 g	Fermentis
--------------	-----	-----	--------	-----------