

# Żytko

- Gravity **14.3 BLG**
- ABV ---
- IBU **64**
- SRM **11.8**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3.6 kg (69.2%)	80 %	4
Grain	Żytni	1.2 kg (23.1%)	85 %	8
Grain	Strzegom Karmel 150	0.4 kg (7.7%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	15 g	30 min	15.5 %
Boil	Mosaic	60 g	10 min	10 %
Boil	Sorachi Ace	30 g	10 min	10 %
Boil	Cascade	65 g	2 min	6 %
Boil	Zythos	30 g	2 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	11 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	5 g	Mash	90 min
Fining	mech irlandzki	10 g	Boil	15 min