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

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

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