

## #39 Żytnie IPA

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **44**
- SRM **11.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **62 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **1 min** at **78C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.2 kg (48.9%)	80 %	5
Grain	płatki żytnie	1.1 kg (24.4%)	60 %	4
Grain	Strzegom Wiedeński	1 kg (22.2%)	79 %	10
Grain	Special B Malt	0.2 kg (4.4%)	65.2 %	315

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	15 g	60 min	13.5 %
Aroma (end of boil)	Riwaka	15 g	5 min	3.3 %
Whirlpool	Nelson Sauvín	10 g	10 min	12.5 %
Whirlpool	Galaxy	10 g	10 min	17.9 %
Whirlpool	El Dorado	10 g	10 min	15.5 %
Dry Hop	Nelson Sauvín	10 g	2 day(s)	12.5 %
Dry Hop	Galaxy	10 g	2 day(s)	17.9 %
Dry Hop	El Dorado	10 g	2 day(s)	15.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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US-05	Ale	Slant	500 ml	---
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	5 g	Mash	60 min
Water Agent	sól epon	3 g	Mash	60 min
Water Agent	sól	1 g	Mash	60 min
Water Agent	chlerek wapnia	6 g	Mash	60 min

### Notes

- Woda Żywiecki Kryształ 5l  
<https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=D1D1HHR>

chlerek wapnia roztwór 33% więc ostatecznie dodajemy ilość x3  
*Jan 5, 2025, 10:23 PM*