

## #51 Żytnie IPA

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **54**
- SRM **6.7**
- Style **Rye IPA**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **2 %**
- Size with trub loss **26.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **9.43 %/h**
- Boil size **31 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.6 liter(s)**
- Total mash volume **30.4 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **15 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **23.6 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **15 min** at **62C**
- Keep mash **30 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **31 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (29.6%)	82 %	4
Grain	Viking Pale Ale malt	3 kg (44.4%)	80 %	5
Grain	Viking Żytni	1 kg (14.8%)	85 %	5
Grain	Strzegom Wiedeński	0.5 kg (7.4%)	79 %	10
Grain	Strzegom Karmel 150	0.25 kg (3.7%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	15.5 %
Boil	Centennial	15 g	30 min	10.5 %
Boil	Chinook	15 g	30 min	13 %
Aroma (end of boil)	Centennial	15 g	0 min	10.5 %
Aroma (end of boil)	Chinook	15 g	0 min	13 %
Dry Hop	Centennial	20 g	3 day(s)	10.5 %

Dry Hop	Chinook	20 g	3 day(s)	13 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	200 ml	Fermentum Mobile