

# Freewolny Włóczykij

- Gravity **7.8 BLG**
- ABV **3 %**
- IBU **23**
- SRM **3.7**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **18.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10 liter(s)**
- Total mash volume **12.9 liter(s)**

## Steps

- Temp **72 C**, Time **70 min**

## Mash step by step

- Heat up **10 liter(s)** of strike water to **79.4C**
- Add grains
- Keep mash **70 min** at **72C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	2 kg (69.9%)	80 %	8
Grain	Strzegom Pilzneński	0.21 kg (7.3%)	80 %	4
Grain	Weyermann - Caramel	0.5 kg (17.5%)	78 %	4
Grain	Żytni	0.15 kg (5.2%)	85 %	8

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	5 g	15 min	13.5 %
Boil	Amarillo	5 g	15 min	8.9 %
Boil	Simcoe	5 g	15 min	11.4 %
Boil	Citra	7 g	10 min	13.5 %
Boil	Amarillo	5 g	10 min	8.9 %
Boil	Simcoe	5 g	10 min	11.4 %
Boil	Citra	18 g	0 min	13.5 %
Boil	Amarillo	20 g	0 min	8.9 %
Boil	Simcoe	20 g	0 min	11.4 %
Dry Hop	Citra	30 g	4 day(s)	13.5 %
Dry Hop	Amarillo	30 g	4 day(s)	8.9 %
Dry Hop	Simcoe	30 g	4 day(s)	11.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---