

# Warsztaty 2022

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **78**
- SRM **4.8**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (76.9%)	80 %	5
Grain	Pszeniczny	1 kg (15.4%)	85 %	4
Grain	Płatki owsiane	0.5 kg (7.7%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	100 g	60 min	4.5 %
Whirlpool	Galaxy	50 g	50 min	15 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us5	Ale	Dry	10 g	---