

# Warsztat Biórków 25.03.2023

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **27**
- SRM **8.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **52 min**
- Evaporation rate **15 %/h**
- Boil size **23.4 liter(s)**

## Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **15.3 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **11.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **23.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (91.4%)	80 %	5
Grain	Strzegom Karmel 300	0.18 kg (4.7%)	70 %	299
Grain	Pszeniczny	0.15 kg (3.9%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	17 g	50 min	10.1 %
Boil	Amarillo	10 g	10 min	9.9 %
Aroma (end of boil)	amariilo	13 g	1 min	10.1 %
Aroma (end of boil)	Vic Secret	21 g	1 min	16.3 %
Dry Hop	Amarillo	30 g	2 day(s)	10.1 %