

# Warsztaty1

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- Gravity **14.3 BLG**
- ABV ---
- IBU **24**
- SRM **6.3**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **17.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (76.3%)	81 %	4
Grain	Monachijski	0.6 kg (10.2%)	80 %	16
Grain	Pszeniczny	0.6 kg (10.2%)	85 %	4
Grain	Słód Caramunich Typ II Weyermann	0.2 kg (3.4%)	73 %	120

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Cascade	25 g	20 min	6 %
Aroma (end of boil)	Citra	25 g	0 min	12 %
Dry Hop	Cascade	25 g	3 day(s)	6 %
Dry Hop	Citra	25 g	3 day(s)	12 %
Dry Hop	Amarillo	10 g	3 day(s)	9.5 %
Dry Hop	Simcoe	30 g	3 day(s)	13.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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FM52 Amerykański Sen	Ale	Liquid	300 ml	Fermentum Mobile
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