

# mikser

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU ---
- SRM **38.7**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **68 C**, Time **55 min**
- Temp **72 C**, Time **5 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **55 min** at **68C**
- Keep mash **5 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale zero	3 kg (75%)	82 %	5
Grain	Strzegom Karmel 30	0.5 kg (12.5%)	75 %	30
Grain	Strzegom Czekoladowy ciemny	0.5 kg (12.5%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Chinook	15 g	45 min	13 %
Mash	Marynka	15 g	30 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	12 g	Fermentis