

# Jesienna rozgrzewka

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **37**
- SRM **5.6**
- Style **American Amber Ale**

## 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 **20 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pale ale	4.5 kg (90%)	85 %	3
Grain	Karmelowy Czerwony	0.5 kg (10%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	10 g	10 min	6.3 %
Boil	Szyszka z Kopaniny	60 g	60 min	5.2 %

Dać 30% więcej niż granulatu = czyli 80g szyszki w woreczku muślinowym.

## Yeasts

Name	Type	Form	Amount	Laboratory
US West Coast gozdawa	Ale	Dry	11.5 g	---