

# Pale Ale 20L Bez chmielenia na zimno

- Gravity **12.6 BLG**
- ABV ---
- IBU **50**
- SRM **5.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (100%)	79 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	60 min	13.5 %
Aroma (end of boil)	Citra	15 g	25 min	13.5 %
Aroma (end of boil)	Citra	15 g	15 min	13.5 %
Aroma (end of boil)	Citra	40 g	5 min	13.5 %
Whirlpool	Citra	20 g	0 min	13.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis