

# piwerko

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **9**
- SRM **3.3**
- Style **American Pale Ale**

## 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 **13.5 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (55.6%)	80 %	4
Grain	Płatki owsiane	0.3 kg (6.7%)	85 %	3
Grain	Pszoniczny	1.7 kg (37.8%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Citra	10 g	10 min	12 %
Whirlpool	Citra	10 g	10 min	12 %
Whirlpool	Nelson Sauvín	10 g	10 min	11 %
Dry Hop	Nelson Sauvín	40 g	2 day(s)	11 %
Dry Hop	Citra	40 g	2 day(s)	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wlp644	Ale	Liquid	100 ml	wlp