

# Mandaryna Pale Ale - po modyfikacjach

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **30**
- SRM **11**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **0 %**
- Size with trub loss **25 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **30.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	2 kg (30.8%)	79 %	22
Grain	Strzegom Pale Ale	3 kg (46.2%)	79 %	6
Grain	Słód Crystal	0.5 kg (7.7%)	73 %	160
Grain	Strzegom Wiedeński	1 kg (15.4%)	79 %	10

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	70 min	8.8 %
Boil	Mandarina Bavaria	20 g	15 min	7.5 %
Boil	Mandarina Bavaria	40 g	10 min	7.5 %
Boil	Mandarina Bavaria	40 g	5 min	7.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11 g	fermentis