

# Mandaryna Pale Ale

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **52**
- SRM **5.3**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

## Steps

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

## Mash step by step

- Heat up **18.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.2 kg (52.5%)	81 %	4
Grain	Viking Pale Ale malt	2.5 kg (41%)	80 %	5
Grain	Caramel/Crystal Malt - 30L	0.4 kg (6.6%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	13 g	70 min	13.5 %
Boil	Mandarina Bavaria	25 g	15 min	10 %
Boil	Mandarina Bavaria	50 g	10 min	10 %
Boil	Mandarina Bavaria	50 g	5 min	10 %

## Yeasts

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