

# Mandarina Ale

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **58**
- SRM **3.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **6 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **63 C**, Time **75 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **75 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **33 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (83.3%)	80 %	5
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	40 g	60 min	11 %
Boil	Mandarina Bavaria	50 g	5 min	11 %
Whirlpool	Mandarina Bavaria	50 g	15 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	1000 ml	Fermentum Mobile