

# Mandaryna

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- Gravity **10 BLG**
- ABV **4 %**
- IBU **18**
- SRM **4.2**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (75.8%)	81 %	4
Grain	Strzegom Wiedeński	1 kg (21.6%)	79 %	10
Grain	Weyermann - Carared	0.12 kg (2.6%)	75 %	45

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	10 g	60 min	10 %
Whirlpool	Mandarina Bavaria	60 g	5 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	250 ml	Fermentum Mobile