

# Mandarina Pale Ale

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **29**
- SRM **4.2**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.31 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **20.7 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.9 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (52.1%)	80 %	4
Grain	Strzegom Pale Ale	1.5 kg (31.3%)	79 %	6
Grain	Caramel/Crystal Malt - 10L	0.3 kg (6.3%)	75 %	20
Grain	Płatki owsiane	0.5 kg (10.4%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Mandarina Bavaria	60 g	10 min	7.6 %
Boil	Magnum	10 g	30 min	13.5 %
Dry Hop	Mandarina Bavaria	40 g	0 day(s)	7.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis