

# Mandaryna Pale Ale 12 BLG

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **52**
- SRM **4.2**
- 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 **84 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **21.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (56.6%)	82 %	4
Grain	Viking Pale Ale malt	1.9 kg (35.8%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.4 kg (7.5%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	13 g	60 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
Safale US-05	Ale	Slant	150 ml	Fermentis