

# Mandarina Bavaria

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **42**
- SRM **4.1**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **101.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **68 liter(s)**
- Total mash volume **85 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **68 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **50.2 liter(s)** of **76C** water or to achieve **101.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	13 kg (76.5%)	81 %	3
Grain	Monachijski	4 kg (23.5%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	100 g	60 min	12 %
Boil	Mandarina Bavaria	100 g	10 min	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	800 ml	Fermentum Mobile