

## Pale ale mandarina

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- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **54**
- SRM **3.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **9.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

### Steps

- Temp **68 C**, Time **65 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **9.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **65 min** at **68C**
- Keep mash **5 min** at **75C**
- Sparge using **5.6 liter(s)** of **76C** water or to achieve **12 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	2.2 kg (68.8%)	80.5 %	2
Grain	Briess - Wheat Malt, White	1 kg (31.3%)	85 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	15 g	60 min	10 %
Aroma (end of boil)	Mandarina Bavaria	15 g	15 min	10 %
Whirlpool	Mandarina Bavaria	15 g	25 min	10 %
Dry Hop	Mandarina Bavaria	15 g	3 day(s)	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale