

## 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     |