

Mandarina Pale Ale

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **29**
- SRM **4.2**
- Style **Extra Special/Strong Bitter (English 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 **70 min**
- Evaporation rate **9 %/h**
- Boil size **31.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **72 C**, Time **1 min**
- 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 **1 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (56.6%)	80 %	4
Grain	Viking Pale Ale malt	1.9 kg (35.8%)	80 %	5
Grain	Caramel/Crystal Malt - 10L	0.4 kg (7.5%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	11.5 %
Boil	Mandarina Bavaria	18 g	15 min	8.4 %
Boil	Mandarina Bavaria	25 g	10 min	8.4 %
Boil	Mandarina Bavaria	25 g	5 min	8.4 %

Yeasts

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