

# Palone mandarynki

- Gravity **15.1 BLG**
- ABV ---
- IBU **68**
- SRM **40**
- Style **Oatmeal Stout**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **10 %**
- Size with trub loss **33 liter(s)**
- Boil time **65 min**
- Evaporation rate **8 %/h**
- Boil size **35.9 liter(s)**

## Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **30 liter(s)**

## Steps

- Temp **50 C**, Time **10 min**
- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **22.9 liter(s)** of strike water to **54.6C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **50 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **20.1 liter(s)** of **76C** water or to achieve **35.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (54.8%)	79 %	6
Grain	Strzegom Monachijski typ II	1 kg (13.7%)	79 %	22
Grain	Jęczmień palony	0.5 kg (6.8%)	55 %	985
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.4%)	68 %	1200
Grain	Oats, Flaked	1.3 kg (17.8%)	80 %	2
Sugar	Dememera Sugar	0.25 kg (3.4%)	100 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Waimea	50 g	60 min	17 %
Boil	Mandarina Bavaria	15 g	15 min	7.9 %
Boil	Mandarina Bavaria	15 g	10 min	7.9 %
Boil	Mandarina Bavaria	15 g	5 min	7.9 %
Boil	Mandarina Bavaria	15 g	1 min	7.9 %
Dry Hop	Mandarina Bavaria	40 g	7 day(s)	7.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	800 ml	Safale