

## #168 Mandaryna w USA

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **17**
- SRM **4.4**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **24.9 liter(s)**
- Trub loss **7 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **66 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	No. 19 Floor Malt Maris Otter Crisp	1.66 kg (30.1%)	80 %	6.5
Grain	Weyermann pilsneński premium	1.66 kg (30.1%)	80 %	2
Grain	Weyermann żytni jasny	1.66 kg (30.1%)	85 %	7
Grain	Viking Malt pszeniczny	0.33 kg (6%)	81 %	4
Grain	Viking Malt cookie	0.2 kg (3.6%)	80 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria DE 2022	10 g	60 min	7.8 %
Aroma (end of boil)	Mandarina Bavaria DE 2022	40 g	10 min	7.8 %
Dry Hop	Mandarina Bavaria DE 2022	50 g	7 day(s)	7.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Lallemand Verdant IPA	Ale	Slant	50 ml	Lallemand
--------------------------	-----	-------	-------	-----------