

# pomarańcza

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **28**
- SRM **4.7**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **23.6 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18.4 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale	3.6 kg (62.6%)	80 %	7
Grain	Pszeniczny	0.85 kg (14.8%)	85 %	4
Grain	Płatki owsiane	0.8 kg (13.9%)	85 %	3
Adjunct	Milk Sugar (Lactose)	0.5 kg (8.7%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	9.4 %
Boil	Marynka	10 g	20 min	9.4 %
Boil	Amarillo	40 g	5 min	7.1 %
Boil	Citra	10 g	5 min	12 %
Boil	Willamette	25 g	5 min	4.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
m 44 x 2	Ale	Dry	20 g	---