

# Klasyczne Marcowe wydajność 91%

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **18**
- SRM **5.7**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **3000 liter(s)**
- Trub loss **0 %**
- Size with trub loss **3000 liter(s)**
- Boil time **90 min**
- Evaporation rate **5.556 %/h**
- Boil size **3250 liter(s)**

## Mash information

- Mash efficiency **91 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **1680 liter(s)**
- Total mash volume **2240 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **1680 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **2130 liter(s)** of **76C** water or to achieve **3250 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	220 kg (39.3%)	81 %	4
Grain	Monachijski	200 kg (35.7%)	80 %	16
Grain	Strzegom Wiedeński	100 kg (17.9%)	79 %	10
Grain	Carahell	30 kg (5.4%)	77 %	26
Grain	Pszeniczny	10 kg (1.8%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	1500 g	90 min	10 %
Boil	Hallertau Spalt Select	3500 g	15 min	3.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
S-23	Lager	Dry	3750 g	Fermentis