

# MARCOWE

- Gravity **15 BLG**
- ABV ---
- IBU **23**
- SRM **11.3**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **46.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30.8 liter(s)**
- Total mash volume **41 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **30.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **25.8 liter(s)** of **76C** water or to achieve **46.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	5 kg (47.6%)	80.5 %	2
Grain	Strzegom Wiedeński	2.8 kg (26.7%)	79 %	10
Grain	Monachijski	1.9 kg (18.1%)	80 %	16
Grain	cristal	0.25 kg (2.4%)	75 %	160
Adjunct	płatki żynie	0.25 kg (2.4%)	80 %	5
Grain	Caraaroma	0.3 kg (2.9%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	20 g	90 min	10 %
Boil	Marynka	25 g	15 min	10 %
Boil	Lublin (Lubelski)	25 g	10 min	4 %

## Yeasts

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

Wyeast - Bavarian Lager	Lager	Liquid	100 ml	Wyeast Labs
-------------------------	-------	--------	--------	-------------

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	10 g	Boil	10 min