

# Marcowe 2019

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **28**
- SRM **9.5**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **31.2 liter(s)**

## Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **30.5 liter(s)**
- Total mash volume **36.6 liter(s)**

## Steps

- Temp **50 C**, Time **15 min**
- Temp **63 C**, Time **120 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **30.5 liter(s)** of strike water to **53C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **120 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **6.8 liter(s)** of **76C** water or to achieve **31.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.3 kg (54.1%)	81 %	4
Grain	Strzegom Monachijski typ I	2.7 kg (44.3%)	79 %	16
Grain	Strzegom Karmel 600	0.1 kg (1.6%)	68 %	601

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Magnum	15 g	90 min	12 %
Boil	Sybilla	25 g	15 min	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP800 - Pilsner Lager Yeast	Lager	Liquid	250 ml	White Labs