

# Marcowe

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- Gravity **13.8 BLG**
- ABV ---
- IBU **30**
- SRM **10.7**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **28.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **29.9 liter(s)**
- Boil time **110 min**
- Evaporation rate **10 %/h**
- Boil size **38.8 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **28.5 liter(s)**
- Total mash volume **34.9 liter(s)**

## Steps

- Temp **35 C**, Time **0 min**
- Temp **63 C**, Time **45 min**
- Temp **66 C**, Time **20 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **28.5 liter(s)** of strike water to **36.7C**
- Add grains
- Keep mash **0 min** at **35C**
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **66C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **38.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (47.3%)	80 %	4
Grain	Strzegom Monachijski typ I	2.385 kg (37.6%)	79 %	16
Grain	Weyermann - Vienna Malt	0.5 kg (7.9%)	81 %	8
Grain	Strzegom Karmel 150	0.185 kg (2.9%)	75 %	150
Grain	Weyermann - Carapils	0.2 kg (3.2%)	78 %	4
Grain	Strzegom Karmel 300	0.07 kg (1.1%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Premiant	20 g	100 min	8 %
Boil	Premiant	20 g	60 min	8 %
Aroma (end of boil)	Premiant	10 g	15 min	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	250 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	Irish Moss	5 g	Boil	15 min

## Notes

- Water profile:  
<http://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=MQ666YP>  
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