

# Marcowe

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **22**
- SRM **10.5**
- Style **Oktoberfest/Märzen**

## 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount       | Yield | EBC |
|-------|-----------------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński         | 2.3 kg (46%) | 80 %  | 4   |
| Grain | Strzegom Monachijski typ II | 2.3 kg (46%) | 79 %  | 22  |
| Grain | Strzegom Karmel 150         | 0.4 kg (8%)  | 75 %  | 150 |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Perle     | 20 g   | 60 min | 7 %        |
| Boil    | Tradition | 50 g   | 5 min  | 5.5 %      |

## Yeasts

| Name             | Type  | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry  | 23 g   | Fermentis  |