# marcowe

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **26**
- SRM **10.6**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **52.9 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **30.6 liter(s)**

## Steps

- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **20.4 liter(s)** of strike water to **75C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **50 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **42.7 liter(s)** of **76C** water or to achieve **52.9 liter(s)** of wort

## Fermentables

| Type | Name | Amount | Yield | EBC |
|---|---|---|---|---|
| Grain | Strzegom Pilzneński | 4.6 kg *(45.1%)* | 80 % | 4 |
| Grain | Strzegom Monachijski typ II | 4.6 kg *(45.1%)* | 79 % | 22 |
| Grain | Strzegom Karmel 150 | 0.8 kg *(7.8%)* | 75 % | 150 |
| Grain | Strzegom Pszeniczny | 0.2 kg *(2%)* | 81 % | 6 |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---|---|---|---|
| Boil | mgnum | 28 g | 60 min | 12 % |
| Boil | Magnum | 20 g | 20 min | 12 % |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|---|---|---|---|
| w 34\70 | Lager | Slant | 300 ml | --- |