

# 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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