

## marcowe

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **28**
- SRM **7.1**
- Style **Oktoberfest/Märzen**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **63 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **17.1 liter(s)** of strike water to **69.8C**
- Add grains
- Keep mash **15 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	5.3 kg (97.6%)	79 %	10
Grain	Karmelowy	0.13 kg (2.4%)	75 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)10	20 g	30 min	4 %
Boil	Marynka	20 g	60 min	10 %