

## Marcowe

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **23**
- SRM **10.6**
- Style **Oktoberfest/Märzen**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **24.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

### Steps

- Temp **68 C**, Time **20 min**
- Temp **100 C**, Time **20 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **17.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **20 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Keep mash **20 min** at **100C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4 kg (70.2%)	79 %	16
Grain	Pilzneński	1.1 kg (19.3%)	81 %	4
Grain	Weyermann Caramunich 3	0.2 kg (3.5%)	76 %	150
Grain	Weyermann - Melanoiden Malt	0.4 kg (7%)	81 %	53

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12 g	60 min	11.5 %
Boil	Hallertau Tradition	20 g	15 min	5 %
Boil	Hallertau Tradition	30 g	5 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Namysłów Lager	Lager	Slant	150 ml	???

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	4 g	Boil	10 min