

## 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	---