

Marcowe

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **21**
- SRM **6.2**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.7 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**
- Temp **51 C**, Time **15 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **56.5C**
- Add grains
- Keep mash **15 min** at **51C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.6 kg (66.1%)	81 %	4
Grain	Strzegom Wiedeński	0.8 kg (14.7%)	79 %	10
Grain	Strzegom Monachijski typ II	0.8 kg (14.7%)	79 %	22
Grain	Carahell	0.25 kg (4.6%)	77 %	26

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.5 %
Boil	Perle	20 g	5 min	7 %
Boil	Perle	10 g	1 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis