Marcowe

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **36**
- SRM **8.8**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	5 kg *(100%)*	80 %	20

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	6.4 %
Boil	Zula	30 g	5 min	13.3 %
Boil	lunga	30 g	5 min	12.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.4 g	Fermentis