

Marcowe

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **31**
- SRM **8.4**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **2 %**
- Size with trub loss **22.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **13 %/h**
- Boil size **28.1 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **25.8 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **74 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **74C**
- Keep mash **1 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pilzneński	2 kg (31%)	80 %	4
Grain	słód monachijski	2 kg (31%)	80 %	16
Grain	słód wiedeński	2 kg (31%)	80 %	9
Grain	Carahell	0.15 kg (2.3%)	77 %	26
Grain	BESTMALZ - Best Melanoidin	0.3 kg (4.7%)	75 %	71

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	23 g	60 min	10 %
Boil	Tettnang	17 g	20 min	4 %
Boil	Marynka	4 g	20 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
fermentis w34/70,	Lager	Slant	200 ml	---