

Marcowe

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **24**
- SRM **7.8**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.7 liter(s)**
- Total mash volume **27.9 liter(s)**

Steps

- Temp **53 C**, Time **15 min**
- Temp **64 C**, Time **40 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **21.7 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **73C**
- Keep mash **0 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1 kg (16.1%)	82 %	4
Grain	Weyermann - Pilsner Malt	1 kg (16.1%)	81 %	5
Grain	Weyermann - Vienna Malt	1 kg (16.1%)	81 %	8
Grain	Weyermann Monachiski I	2.5 kg (40.3%)	80 %	16
Grain	Viking Karmel 150	0.2 kg (3.2%)	75 %	150
Grain	Platki owsiane błyskawiczne	0.5 kg (8.1%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	30 g	60 min	4.2 %
Boil	Tradition	50 g	20 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Saflager W 34/70	Lager	Slant	1000 ml	Fermentis
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Extras

Type	Name	Amount	Use for	Time
Fining	Wirflock	5 g	Boil	10 min