

Marcowe

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **28**
- SRM **11.7**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **7 %/h**
- Boil size **32.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.9 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **20 min**
- Temp **65 C**, Time **10 min**
- Temp **66 C**, Time **10 min**
- Temp **68 C**, Time **10 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **16.7 liter(s)** of strike water to **57.9C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **64C**
- Keep mash **10 min** at **65C**
- Keep mash **10 min** at **66C**
- Keep mash **10 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **21.9 liter(s)** of **76C** water or to achieve **32.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Vikking Red Active	4.5 kg (72.6%)	80 %	35
Grain	Viking Pale Ale malt	1.6 kg (25.8%)	80 %	5
Grain	Strzegom Karmel 150	0.1 kg (1.6%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	25 g	60 min	11.2 %
Boil	Saaz (Czech Republic)	20 g	20 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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W70/34	Lager	Slant	250 ml	---
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