

Marcowe

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **14**
- SRM **6.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **24.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.7 liter(s)**
- Total mash volume **27.9 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **7 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **21.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **7 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (32.3%)	80 %	4
Grain	Strzegom Wiedeński	2 kg (32.3%)	79 %	10
Grain	Strzegom Monachijski typ II	1 kg (16.1%)	79 %	22
Grain	Strzegom Pszeniczny	0.7 kg (11.3%)	81 %	6
Grain	Płatki owsiane	0.5 kg (8.1%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	30 g	40 min	4 %
Boil	Tettnang	20 g	10 min	4 %
Aroma (end of boil)	Marynka	10 g	1 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
saflager s-33	Lager	Dry	11 g	fermentis