Marcowe

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **20**
- SRM **6.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg *(36.4%)*	82 %	4
Grain	Strzegom Wiedeński	2 kg *(36.4%)*	79 %	10
Grain	Strzegom Monachijski typ II	1.5 kg *(27.3%)*	79 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	35 g	60 min	5.5 %