

Marcowe

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **27**
- SRM **8.1**
- 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 **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.4 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 1.75 kg (31.5%) | 79 % | 16 |
| Grain | Strzegom Wiedeński | 1.75 kg (31.5%) | 79 % | 10 |
| Grain | Viking Pilsner malt | 1.75 kg (31.5%) | 82 % | 4 |
| Grain | Carahell | 0.15 kg (2.7%) | 77 % | 26 |
| Grain | crystal malt | 0.15 kg (2.7%) | 78 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 7.1 % |
| Boil | Tettnang | 15 g | 20 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|-------|--------|--------|------------------|
| FM31 Bawarska Dolina | Lager | Liquid | 30 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------|----------------|--------|---------|--------|
| Other | Mech Irlandzki | 5 g | Boil | 15 min |
| Other | Lactol | 4 g | Mash | --- |