

Marcowe

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **21**
- SRM **6.2**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.7 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**
- Temp **51 C**, Time **15 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **56.5C**
- Add grains
- Keep mash **15 min** at **51C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Pilzneński | 3.6 kg (66.1%) | 81 % | 4 |
| Grain | Strzegom Wiedeński | 0.8 kg (14.7%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ II | 0.8 kg (14.7%) | 79 % | 22 |
| Grain | Carahell | 0.25 kg (4.6%) | 77 % | 26 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Tradition | 30 g | 60 min | 5.5 % |
| Boil | Perle | 20 g | 5 min | 7 % |
| Boil | Perle | 10 g | 1 min | 7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |