

Marcowe

- Gravity **13.6 BLG**
- ABV ---
- IBU **23**
- SRM **9.3**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **8 %**
- Size with trub loss **13 liter(s)**
- Boil time **70 min**
- Evaporation rate **12 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **16.5 liter(s)**

Steps

- Temp **52 C**, Time **15 min**
- Temp **68 C**, Time **45 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13.2 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **45 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **6.5 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|--------|-----|
| Grain | Strzegom Wiedeński | 2.5 kg (75.8%) | --- % | 10 |
| Grain | Strzegom Monachijski typ I | 0.5 kg (15.2%) | --- % | 16 |
| Grain | Strzegom Karmel 30 | 0.1 kg (3%) | --- % | 30 |
| Grain | Acid Malt | 0.1 kg (3%) | 58.7 % | 6 |
| Grain | Oats, Flaked | 0.1 kg (3%) | --- % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | hallertauer magnum | 5 g | 60 min | 13.5 % |
| Boil | Hallertau comet | 5 g | 30 min | 7 % |
| Boil | Hallertau comet | 10 g | 10 min | 7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------------------|-------|-------|--------|-----------------|
| Mangrove Jack's M76 Bavarian Lager | Lager | Slant | 500 ml | Mangrove Jack's |

Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

| Type | Name | Amount | Use for | Time |
|-------------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 3 g | Boil | 60 min |
| Water Agent | chlorek wapnia | 4 g | Mash | --- |