

Marcowe

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **30**
- SRM **9.5**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **29.3 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **100 C**, Time **10 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **76C**
- Keep mash **10 min** at **100C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 2 kg (30.8%) | 79 % | 16 |
| Grain | Strzegom Wiedeński | 2 kg (30.8%) | 79 % | 10 |
| Grain | Strzegom Pilzneński | 2 kg (30.8%) | 80 % | 4 |
| Grain | Strzegom Karmel 30 | 0.2 kg (3.1%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 0.3 kg (4.6%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Hallertau | 40 g | 60 min | 6.3 % |
| Boil | Tettnang | 30 g | 20 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-----------------------------------|-------|-------|--------|------------|
| WLP920 - Old Bavarian Lager Yeast | Lager | Slant | 200 ml | White Labs |
|-----------------------------------|-------|-------|--------|------------|