

Bavarian

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **30**
- SRM **3.2**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.2 liter(s)**
- Total mash volume **12.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|----------------|--------|-----|
| Grain | Pilzneński | 3 kg (97.7%) | 81 % | 4 |
| Grain | Acid Malt | 0.07 kg (2.3%) | 58.7 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil | Magnum | 10 g | 60 min | 13.5 % |
| Boil | Magnum | 5 g | 15 min | 13.5 % |
| Aroma (end of boil) | Magnum | 10 g | 5 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------|-------|-------|--------|-------------|
| Wyeast - Bavarian Lager | Lager | Slant | 300 ml | Wyeast Labs |