

Pils niemiecki

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **35**
- SRM **3.7**
- 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 **7 %/h**
- Boil size **18.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.1 liter(s)**
- Total mash volume **14.8 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **11.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **18.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------|----------------|-------|-----|
| Grain | Pilzneński | 3.6 kg (97.3%) | 81 % | 4 |
| Grain | Vienna Malt | 0.1 kg (2.7%) | 78 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil | Marynka | 7 g | 60 min | 9.1 % |
| Boil | Hallertau Mittelfruh | 25 g | 60 min | 4 % |
| Boil | Hallertau Mittelfruh | 30 g | 20 min | 4 % |
| Boil | Hallertau Mittelfruh | 45 g | 0 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------|-------|-------|--------|-------------|
| Wyeast - 2124 Bohemian Lager | Lager | Slant | 250 ml | Wyeast Labs |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------|--------|---------|--------|
| Water Agent | CaSO4 | 5 g | Mash | 60 min |

| | | | | |
|-------------|-------------|-----|------|--------|
| Water Agent | Lactic Acid | 5 g | Mash | 60 min |
|-------------|-------------|-----|------|--------|