

## German Pils

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **39**
- SRM **3.4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **70 min**
- Evaporation rate **11 %/h**
- Boil size **13 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5.35 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **14.3 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **1 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **67C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **3.3 liter(s)** of **76C** water or to achieve **13 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount          | Yield | EBC |
|-------|---------------------|-----------------|-------|-----|
| Grain | Viking Pilsner malt | 2.05 kg (91.1%) | 82 %  | 4   |
| Grain | Weyermann Carapils  | 0.2 kg (8.9%)   | 78 %  | 4   |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Iunga Polish Hops | 10 g   | 60 min | 10 %       |
| Boil                | Tradition         | 15 g   | 20 min | 5.4 %      |
| Aroma (end of boil) | Tradition         | 10 g   | 10 min | 5.4 %      |

### Yeasts

| Name                 | Type  | Form   | Amount  | Laboratory       |
|----------------------|-------|--------|---------|------------------|
| FM31 Bawarska Dolina | Lager | Liquid | 1200 ml | Fermentum Mobile |