

German Pils

- 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 |