

Pils

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **29**
- SRM **3.8**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.5 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **69.9C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Weyermann - Pilsner Malt | 4.2 kg (93.3%) | 81 % | 5 |
| Grain | Weyermann - Carapils | 0.3 kg (6.7%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Iunga | 20 g | 60 min | 12 % |
| Boil | Lubelski | 25 g | 15 min | 2.3 % |
| Aroma (end of boil) | Lubelski | 26 g | 1 min | 2.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry | 22 g | Fermentis |