

## Pils

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- Gravity **20 BLG**
- ABV ---
- IBU **33**
- SRM **7.9**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.1 liter(s)**
- Total mash volume **28.1 liter(s)**

### Steps

- Temp **63 C**, Time **70 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **21.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **70 min** at **63C**
- Keep mash **10 min** at **72C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount          | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Pilsner (2 Row) Ger        | 6.75 kg (96.2%) | 81 %  | 4   |
| Grain | Amber Malt                 | 0.1 kg (1.4%)   | 75 %  | 43  |
| Grain | Caramel/Crystal Malt - 40L | 0.17 kg (2.4%)  | 74 %  | 79  |

### Hops

| Use for | Name            | Amount | Time   | Alpha acid |
|---------|-----------------|--------|--------|------------|
| Boil    | Northern Brewer | 25 g   | 60 min | 9 %        |
| Boil    | Saaz (USA)      | 35 g   | 30 min | 3.75 %     |
| Boil    | Saaz (USA)      | 30 g   | 5 min  | 3.75 %     |

### Yeasts

| Name          | Type  | Form | Amount | Laboratory                         |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry  | 11.5 g | Fermentis Division of S.I.Lesaffre |