

## #39 Helles

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **20**
- SRM **2.2**
- Style **Munich Helles**

### Batch size

- Expected quantity of finished beer **550 liter(s)**
- Trub loss **5 %**
- Size with trub loss **577.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **695.8 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **367.5 liter(s)**
- Total mash volume **472.5 liter(s)**

### Steps

- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **367.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **20 min** at **68C**
- Keep mash **30 min** at **72C**
- Sparge using **433.3 liter(s)** of **76C** water or to achieve **695.8 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield  | EBC |
|-------|----------------------|---------------|--------|-----|
| Grain | Briess - Pilsen Malt | 105 kg (100%) | 80.5 % | 2   |

### Hops

| Use for | Name        | Amount | Time   | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil    | Tettnang    | 300 g  | 60 min | 4 %        |
| Boil    | lunga       | 250 g  | 60 min | 11 %       |
| Boil    | Hersbrucker | 250 g  | 10 min | 3 %        |
| Boil    | Tettnang    | 250 g  | 10 min | 4 %        |
| Boil    | Tettnang    | 250 g  | 5 min  | 4 %        |
| Boil    | Hersbrucker | 250 g  | 5 min  | 3 %        |

### Yeasts

| Name             | Type  | Form  | Amount  | Laboratory |
|------------------|-------|-------|---------|------------|
| Saflager W 34/70 | Lager | Slant | 7500 ml | Fermentis  |