

#39 Helles

- 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 |