

# Helles

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **16**
- SRM **4.3**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **37 liter(s)**
- Trub loss **5 %**
- Size with trub loss **38.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **48.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **31.8 liter(s)**
- Total mash volume **40.9 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **31.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **26.2 liter(s)** of **76C** water or to achieve **48.9 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount        | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Strzegom Pilzneński | 8 kg (87.9%)  | 80 %  | 4   |
| Grain | Strzegom Wiedeński  | 0.9 kg (9.9%) | 79 %  | 10  |
| Grain | Biscuit Malt        | 0.2 kg (2.2%) | 79 %  | 45  |

## Hops

| Use for             | Name                 | Amount | Time   | Alpha acid |
|---------------------|----------------------|--------|--------|------------|
| Boil                | Hallertau Mittelfruh | 45 g   | 60 min | 3.7 %      |
| Aroma (end of boil) | Hallertau Mittelfruh | 50 g   | 15 min | 3.7 %      |
| Aroma (end of boil) | Hallertau Mittelfruh | 55 g   | 1 min  | 3.7 %      |

## Yeasts

| Name         | Type  | Form   | Amount  | Laboratory |
|--------------|-------|--------|---------|------------|
| Wyeast- 2308 | Lager | Liquid | 2000 ml | ---        |