

HELLES

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **3.3**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.8 liter(s)**
- Total mash volume **12.6 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **70 C**, Time **15 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **9.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **70C**
- Keep mash **0 min** at **76C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|---------------|--------|-----|
| Grain | BESTMALZ - Best Pilsen | 2.8 kg (100%) | 80.5 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil | lunga | 8 g | 60 min | 11.5 % |
| Boil | Hallertau Mittelfruh | 10 g | 15 min | 6.1 % |
| Boil | Hallertau Mittelfruh | 10 g | 2 min | 6.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|-------|--------|--------|------------------|
| FM31 Bawarska Dolina | Lager | Liquid | 50 ml | Fermentum Mobile |