

#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	Iunga	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