

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	Iunga	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