

# Munich Helles

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **21**
- SRM **4.5**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **32.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **32.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.7 kg (78.3%)	80 %	4
Grain	Strzegom Monachijski typ I	1.1 kg (18.3%)	79 %	16
Grain	Strzegom Pszeniczny	0.2 kg (3.3%)	81 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	26 g	60 min	7.8 %
Boil	Perle	22 g	10 min	4.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Slant	100 ml	Fermentis Division of S.I.Lesaffre