

# munich hell yes!

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **21**
- SRM **3.4**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **3.9 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **13.1 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **68.5C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.4 kg (89.6%)	80 %	4
Grain	Weyermann - Carapils	0.25 kg (9.3%)	78 %	4
Grain	zakwaszający	0.03 kg (1.1%)	75 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	10 g	60 min	6.1 %
Aroma (end of boil)	Hallertau Spalt Select	12 g	25 min	4 %
Aroma (end of boil)	Hallertau Spalt Select	11 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wyeast - munich lager	Lager	Liquid	1043.48 ml	---