

## Helles 2

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **18**
- SRM **3.7**
- Style **Munich Helles**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

### Steps

- Temp **66 C**, Time **45 min**
- Temp **70 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **30 min** at **70C**
- Keep mash **5 min** at **76C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.8 kg (96%)	80 %	4
Grain	carabody	0.2 kg (4%)	75 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Magnat	10 g	60 min	11.7 %
Boil	Lublin (Lubelski) PH	30 g	5 min	5.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	18000 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirfloc	1 g	Boil	5 min