

Helles

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **18**
- SRM **3.8**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **30.3 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **24.8 liter(s)** of strike water to **71.1C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **2 min** at **78C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	5 kg (90.9%)	80 %	4
Grain	Weyermann - Carapils	0.5 kg (9.1%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	30 g	60 min	5 %
Boil	Saaz (Czech Republic)	10 g	15 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	5 g	0 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	200 ml	Fermentis