

Helles

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **16**
- SRM **4.3**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **37 liter(s)**
- Trub loss **5 %**
- Size with trub loss **38.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **48.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **31.8 liter(s)**
- Total mash volume **40.9 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **31.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **26.2 liter(s)** of **76C** water or to achieve **48.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	8 kg (87.9%)	80 %	4
Grain	Strzegom Wiedeński	0.9 kg (9.9%)	79 %	10
Grain	Biscuit Malt	0.2 kg (2.2%)	79 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Mittelfruh	45 g	60 min	3.7 %
Aroma (end of boil)	Hallertau Mittelfruh	50 g	15 min	3.7 %
Aroma (end of boil)	Hallertau Mittelfruh	55 g	1 min	3.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast- 2308	Lager	Liquid	2000 ml	---