

# MONACHIJSKI HELLES

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **20**
- SRM **4.2**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **12.2 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **9.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **14.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód pilzneński Viking Malt (Strzegom)	2.5 kg (92.6%)	--- %	4
Grain	Słód karmelowy jasny Carahell® Weyermann®	0.2 kg (7.4%)	--- %	25

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Hallertauer Mittelfrüh	15 g	60 min	4.8 %
Whirlpool	Hallertauer Mittelfrüh	15 g	20 min	4.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Saflager W34/70	Lager	Dry	11.5 g	Fermentis Saflager

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfoc T	1.25 g	Boil	5 min

## Notes

- schłodzenie brzożki do temp. 9-10°C;  
fermentacja - temperatura piwa w głównej fazie fermentacji 9-10°C, dojrzewanie w temp. 18-19°C (przerwa diacetylowa);  
rozlew - poziom nasycenia 2,2-2,3 vol.;  
refermentacja - 14 dni

profil wody (ppm): Ca 50-100; Mg 10; SO<sub>4</sub> 0-50; Cl 50-100; Alk. całkow. 0-50; RA -50-0  
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