

# Heles - Monachijskie Jasne

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **21**
- SRM **4.7**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.42 liter(s) / kg**
- Mash size **14.5 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **52 C**, Time **20 min**
- Temp **62 C**, Time **60 min**
- Temp **71 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **14.5 liter(s)** of strike water to **56.7C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **60 min** at **62C**
- Keep mash **20 min** at **71C**
- Keep mash **5 min** at **76C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.85 kg (67.1%)	81 %	4
Grain	Monachijski	0.65 kg (15.3%)	80 %	16
Grain	Strzegom Wiedeński	0.6 kg (14.1%)	79 %	10
Grain	Weyermann - Carapils	0.15 kg (3.5%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Mittlefruh	30 g	60 min	4.6 %
Boil	Hallertauer Mittlefruh	20 g	10 min	4.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	2000 ml	Fermentum Mobile

## Notes

- 52°C - 20 min,  
62°C - 15 min,  
dekokt 70°C - 15 min,  
dekokt 100°C - 20 min,  
zacier główny w tym czasie: 62°C - 63°C - 60 min,  
71°C - 20 min,  
76°C - 5 min.  
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