

# Helles Zula/Amora Preta

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **21**
- SRM **7.3**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **54 liter(s)**
- Trub loss **5 %**
- Size with trub loss **56.7 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **69.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **44 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **33 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **47.9 liter(s)** of **76C** water or to achieve **69.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (39.4%)	81 %	4
Grain	Strzegom Monachijski typ I	5 kg (39.4%)	79 %	16
Dry Extract	WES ekstrakt słodowy jasny	1.7 kg (13.4%)	80 %	45
Grain	Weyermann - Spelt Malt	1 kg (7.9%)	81 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	25 g	60 min	9.7 %
Boil	Zula	25 g	30 min	9.7 %
Boil	Aroma Preta	50 g	5 min	9 %
Whirlpool	Aroma Preta	50 g	0 min	9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	22.5 g	---

## Notes

- Kwas fosforowy 6ml do brzezki i 4ml do wystadzania  
Brzezka 21.04  
Fermentacja burzliwa 15dni  
Stopniowanie temp. fermentacji  
Rozlew 20.05  
300g glukozy na 48l  
*Apr 21, 2021, 10:05 AM*