

# Helles Trzy Baryłki

---

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **23**
- SRM **4.2**
- Style **Munich Helles**

## Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **44.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.1 liter(s) / kg**
- Mash size **34.8 liter(s)**
- Total mash volume **43.3 liter(s)**

## Steps

- Temp **63 C**, Time **20 min**
- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **34.8 liter(s)** of strike water to **68.3C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **44.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilznieński	8 kg (94.1%)	81 %	4
Grain	Carahell	0.5 kg (5.9%)	77 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition,	50 g	60 min	4.3 %
Boil	Tettnang	50 g	30 min	3.7 %