

# Perle Pale Ale

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **4.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **11 %/h**
- Boil size **28.1 liter(s)**

## Mash information

- Mash efficiency **95 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **19.8 liter(s)**

## Steps

- Temp **51 C**, Time **10 min**
- Temp **64 C**, Time **10 min**
- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **15.4 liter(s)** of strike water to **55.4C**
- Add grains
- Keep mash **10 min** at **51C**
- Keep mash **10 min** at **64C**
- Keep mash **60 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	MEP@Lager	4.15 kg (94.3%)	82 %	6
Grain	Strzegom Karmel 30	0.25 kg (5.7%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	20 g	60 min	6 %
Boil	Perle	20 g	10 min	6 %
Boil	Perle	20 g	15 min	6 %
Boil	Perle	20 g	5 min	6 %
Whirlpool	Perle	30 g	20 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	120 ml	Fermentis