

# pale

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **4.2**

## 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 **12.7 liter(s)**

## Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.8 liter(s)**
- Total mash volume **10.4 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**
- Temp **70 C**, Time **10 min**

## Mash step by step

- Heat up **7.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **70C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.6 kg (100%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Puławski	15 g	60 min	6.9 %
Aroma (end of boil)	Cascade	10 g	15 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11 g	---