

# Pale Ale Dry Hopped

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **34**
- SRM **4**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

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

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	10.6 %
Aroma (end of boil)	Lubelski	20 g	5 min	3.8 %
Aroma (end of boil)	Sladek	30 g	5 min	6.2 %
Aroma (end of boil)	Premiant	30 g	5 min	8.2 %
Dry Hop	Lubelski	20 g	5 day(s)	3.8 %
Dry Hop	Sladek	20 g	5 day(s)	6.2 %
Dry Hop	Premiant	20 g	5 day(s)	8.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Dry	11.5 g	Fermentis