

# Pale Ale 1

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **9.4**
- Style **Belgian Pale Ale**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **26.7 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 **67 C**, Time **60 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **26.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	4 kg (80%)	81 %	5
Grain	Cara Gold Castlemalting	0.5 kg (10%)	78 %	120
Grain	Biscuit Malt	0.5 kg (10%)	79 %	50

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	22 g	60 min	7.4 %
Boil	Huell Melon	20 g	15 min	6.8 %
Aroma (end of boil)	Huell Melon	15 g	0 min	6.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's -M15 Empire Ale	Ale	Dry	10 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	5 g	Mash	60 min
Fining	Whirlfloc	1.2 g	Boil	15 min