

# WILD HOP PALE ALE

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **35**
- SRM **3.6**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.2 liter(s)**

## Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **13.2 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (71.4%)	80 %	5
Grain	Pszeniczny	1 kg (23.8%)	85 %	4
Sugar	Cukier biały	0.2 kg (4.8%)	100 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	6.5 %
Boil	Marynka	20 g	25 min	6.5 %
Boil	Dziki chmiel	20 g	10 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Dry	11.5 g	Safbrew

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Sól epsom	2 g	Boil	60 min