

# Hoppy Sour Ale

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **26**
- SRM **3.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.8 liter(s)**
- Total mash volume **10.4 liter(s)**

## Steps

- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **7.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **30 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.25 kg (48.1%)	80 %	5
Grain	Strzegom Pilzneński	1 kg (38.5%)	80 %	4
Grain	Oats, Flaked	0.25 kg (9.6%)	80 %	2
Grain	Weyermann - Carapils	0.1 kg (3.8%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Enigma (AUS)	20 g	10 min	17.2 %
Whirlpool	Enigma (AUS)	30 g	1 min	17.2 %
Dry Hop	falconers flight	100 g	3 day(s)	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wlp644	Ale	Slant	100 ml	White Labs

## Extras

Type	Name	Amount	Use for	Time
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Water Agent	gips	4 g	Mash	60 min
Other	<i>L. bacillus plantarum</i>	4 g	Mash	1000 min