

Hoppy Sour Ale

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **3.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 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 **64 C**, Time **60 min**
- Temp **78 C**, Time **60 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **60 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.5 kg (50%)	81 %	4
Grain	Pszeniczny	2.5 kg (50%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Zula	50 g	20 min	8.3 %
Whirlpool	Exp 2/20	50 g	20 min	11.2 %
Dry Hop	Zula	100 g	3 day(s)	8.3 %
Dry Hop	Exp 2/20	100 g	3 day(s)	11.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
L Planatarum	Ale	Dry	3 g	---
US-05	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Water Agent	CaCl2	5 g	Mash	60 min
Water Agent	Lactic Acid	15 g	Mash	60 min

Fining	Whirlfloc-T	2.5 g	Boil	10 min
--------	-------------	-------	------	--------