

# Hoppy Sour

- Gravity **10 BLG**
- ABV **4 %**
- IBU **2**
- SRM **3.2**
- Style **Berliner Weisse**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **30 min**
- Evaporation rate **20 %/h**
- Boil size **13.3 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **8.8 liter(s)**
- Total mash volume **11 liter(s)**

## Steps

- Temp **36 C**, Time **20 min**
- Temp **52 C**, Time **50 min**
- Temp **67 C**, Time **30 min**
- Temp **78 C**, Time **20 min**

## Mash step by step

- Heat up **8.8 liter(s)** of strike water to **38C**
- Add grains
- Keep mash **20 min** at **36C**
- Keep mash **50 min** at **52C**
- Keep mash **30 min** at **67C**
- Keep mash **20 min** at **78C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **13.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Płatki owsiane	0.22 kg (10%)	60 %	3
Grain	Pszeniczny	1.1 kg (50%)	85 %	4
Grain	Pilzneński	0.88 kg (40%)	81 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Nelson Sauvín	30 g	1 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM51 Grodzie Dębówce	Wheat	Slant	80 ml	Fermentum Mobile
Lactobacillus plantarum	Ale	Dry	3 g	Bakterie

## Notes

- Chlorki +70  
Siarczany + 110

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