

# Grejfrutowy sour ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **4.9**
- Style **American 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 **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **63 C**, Time **20 min**
- Temp **73 C**, Time **45 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **45 min** at **73C**
- Keep mash **15 min** at **78C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.7 kg (48.2%)	80 %	5
Grain	Słód pszeniczny Bestmalz	0.7 kg (12.5%)	82 %	5
Grain	Słód Caramunich Typ II Weyermann	0.1 kg (1.8%)	73 %	120
Adjunct	Koncentrat grejfrutowy	2 kg (35.7%)	50 %	2
Adjunct	Łuska ryżowa	0.1 kg (1.8%)	1 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	35 g	60 min	4 %
Boil	Cascade	50 g	10 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US 05	Ale	Slant	100 ml	---

## Extras

Type	Name	Amount	Use for	Time
Other	Lactobacillus	5 g	Mash	1440 min
Water Agent	Kwas mlekowy	12 g	Mash	60 min
Water Agent	Pożywka drożdżowa	4 g	Boil	15 min