

# Grapefruit Sour Ale TB

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **24**
- SRM **3.2**

## Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **18 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.7 kg (49.1%)	80 %	4
Grain	Strzegom Pszeniczny	0.7 kg (12.7%)	81 %	6
Grain	Karmelowy Jasny 30EBC	0.1 kg (1.8%)	75 %	30
Adjunct	koncentrat soku z grapefruita	2 kg (36.4%)	48 %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	9 g	60 min	13 %
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Boil	Lublin (Lubelski)	15 g	20 min	4 %
Whirlpool	Palisade	100 g	0 min	7.5 %
80*c 15min				
Dry Hop	Cascade	100 g	3 day(s)	6 %
Dry Hop	Centennial	100 g	3 day(s)	10.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	16 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Other	Lactobacillus plantarum	5 g	Primary	1 day(s)

## Notes

- lacto na dobę 35 st.C ph 3.0 - 3.2  
*Sep 23, 2018, 7:35 PM*