

# 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*