

# Mango Sour IPA - Mash-hopping

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **64**
- SRM **5.9**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **15 %**
- Size with trub loss **14.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.6 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **17.9 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**

## Mash step by step

- Heat up **13.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **18.6 liter(s)** of wort

## Fermentables

| Type        | Name                  | Amount          | Yield  | EBC |
|-------------|-----------------------|-----------------|--------|-----|
| Grain       | Viking Pilsner malt   | 3 kg (63.4%)    | 82 %   | 4   |
| Grain       | Viking Vienna Malt    | 1 kg (21.1%)    | 79 %   | 7   |
| Grain       | Karmelowy Jasny 30EBC | 0.48 kg (10.1%) | 75 %   | 30  |
| <> carapils |                       |                 |        |     |
| Sugar       | Milk Sugar (Lactose)  | 0.25 kg (5.3%)  | 76.1 % | 0   |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Mash                | Lublin (Lubelski) | 70 g   | 90 min | 4 %        |
| Zbiór 2022          |                   |        |        |            |
| Boil                | Lublin (Lubelski) | 88 g   | 20 min | 4 %        |
| 2023                |                   |        |        |            |
| Boil                | Lublin (Lubelski) | 88 g   | 10 min | 4 %        |
| 2023                |                   |        |        |            |
| Aroma (end of boil) | lunga             | 25 g   | 10 min | 11 %       |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| k-97 | Ale  | Dry  | 11.5 g | Safale     |

## Extras

| Type        | Name              | Amount | Use for   | Time      |
|-------------|-------------------|--------|-----------|-----------|
| Flavor      | Pulpa mango       | 1350 g | Secondary | 10 day(s) |
| Flavor      | sok cytrynowy nfc | 1000 g | Secondary | 10 day(s) |
| Water Agent | chlorek wapnia    | 4 g    | Mash      | 90 min    |
| Fining      | whirlfloc         | 1 g    | Boil      | 5 min     |
| Flavor      | Laktoza           | 0.25 g | Secondary | 0 day(s)  |

## Notes

- BIAB  
mash-hopping  
Domowa mokra mrożona szyszka  
5ml kwasu f.  
*Nov 22, 2023, 8:08 PM*