

# projekt - Tropical Milkshake IPA #1 - Browar na Wyżynie

- Gravity **15 BLG**
- ABV ---
- IBU **26**
- SRM **4.5**

## Batch size

- Expected quantity of finished beer **19.5 liter(s)**
- Trub loss **6 %**
- Size with trub loss **20.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **23 liter(s)** of wort

## Fermentables

| Type  | Name   | Amount         | Yield | EBC |
|-------|--|----------------|-------|-----|
| Grain | pale base Viking Malt                        | 3.5 kg (60.9%) | 81 %  | 5   |
| Grain | pszeniczny Viking Malt                       | 1 kg (17.4%)   | 81 %  | 5   |
| Grain | płatki owsiane błyskawiczne                  | 0.5 kg (8.7%)  | 50 %  | 3   |
| Grain | płatki pszenne błyskawiczne                  | 0.6 kg (10.4%) | 50 %  | 1   |
| Sugar | cukier z owoców 0.14 + cukier waniliowy 0.01 | 0.15 kg (2.6%) | --- % | --- |

## Hops

| Use for             | Name                     | Amount | Time   | Alpha acid |
|---------------------|--------------------------|--------|--------|------------|
| Boil                | Junga (PL) - granulát    | 10 g   | 60 min | 12.5 %     |
| Aroma (end of boil) | Ekuanot (USA) - granulát | 20 g   | 5 min  | 16.1 %     |
| Aroma (end of boil) | Mosaic (USA) - granulát  | 20 g   | 5 min  | 10.9 %     |
| Whirlpool           | Ekuanot (USA) - granulát | 35 g   | 0 min  | 16.1 %     |

|           |                          |      |          |        |
|-----------|--------------------------|------|----------|--------|
| Whirlpool | Mosaic (USA) - granulat  | 35 g | 0 min    | 10.9 % |
| Dry Hop   | Ekuanot (USA) - granulat | 35 g | 3 day(s) | 16.1 % |
| Dry Hop   | Mosaic (USA) - granulat  | 35 g | 3 day(s) | 10.9 % |

## Yeasts

| Name                 | Type | Form   | Amount  | Laboratory       |
|----------------------|------|--------|---------|------------------|
| FM55 Zielone Wzgórze | Ale  | Liquid | 1000 ml | Fermentum Mobile |

## Extras

| Type        | Name                             | Amount  | Use for   | Time     |
|-------------|----------------------------------|---------|-----------|----------|
| Water Agent | chlorek sodu                     | 7 g     | Mash      | 70 min   |
| Water Agent | siarczan wapnia                  | 5 g     | Mash      | 70 min   |
| Water Agent | kwas mlekowy 80%                 | 4 g     | Mash      | 70 min   |
| Water Agent | woda demineralizowana            | 15000 g | Mash      | 70 min   |
| Flavor      | laktoza                          | 500 g   | Boil      | 15 min   |
| Other       | Ekuanot (USA) - granulat         | 10 g    | Primary   | 7 day(s) |
| Other       | Mosaic (USA) - granulat          | 10 g    | Primary   | 7 day(s) |
| Flavor      | hortex owoce tropikalne 3 paczki | 1350 g  | Secondary | 7 day(s) |
| Spice       | cukier z wanilią 10g             | 10 g    | Secondary | 7 day(s) |