

# Guarana Milkshake IPA

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **43**
- SRM **4.7**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.9 liter(s)**
- Total mash volume **17.8 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **13.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield  | EBC |
|-------|----------------------|----------------|--------|-----|
| Grain | Viking Pale Ale malt | 3 kg (70.4%)   | 80 %   | 5   |
| Grain | Pszeniczny           | 0.3 kg (7%)    | 85 %   | 4   |
| Grain | Weyermann - Carapils | 0.15 kg (3.5%) | 78 %   | 4   |
| Grain | Oats, Flaked         | 0.26 kg (6.1%) | 80 %   | 2   |
| Grain | Wheat, Flaked        | 0.25 kg (5.9%) | 77 %   | 4   |
| Sugar | Milk Sugar (Lactose) | 0.3 kg (7%)    | 76.1 % | 0   |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 8 g    | 60 min   | 12.4 %     |
| Boil                | Mosaic                 | 5 g    | 60 min   | 12 %       |
| Aroma (end of boil) | Mosaic                 | 10 g   | 15 min   | 12 %       |
| Aroma (end of boil) | Simcoe                 | 5.5 g  | 15 min   | 13.2 %     |
| Aroma (end of boil) | Citra                  | 5 g    | 15 min   | 13.7 %     |
| Aroma (end of boil) | Cascade                | 5 g    | 15 min   | 7.1 %      |
| Dry Hop             | Mosaic                 | 10 g   | 3 day(s) | 12 %       |
| Dry Hop             | Citra                  | 10 g   | 3 day(s) | 13.7 %     |

|         |         |      |          |       |
|---------|---------|------|----------|-------|
| Dry Hop | Cascade | 10 g | 3 day(s) | 7.1 % |
|---------|---------|------|----------|-------|

### Yeasts

| Name                            | Type | Form | Amount | Laboratory      |
|---------------------------------|------|------|--------|-----------------|
| Mangrove Jack's -M15 Empire Ale | Ale  | Dry  | 11 g   | Mangrove Jack's |

### Extras

| Type        | Name            | Amount | Use for   | Time      |
|-------------|-----------------|--------|-----------|-----------|
| Flavor      | Guarana pulpa   | 450 g  | Secondary | 10 day(s) |
| Water Agent | gips piwowarski | 1.5 g  | Boil      | 105 min   |