

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 |