

MILKSHAKE IPA #1

- Gravity **10 BLG**
- ABV **4 %**
- IBU **26**
- SRM **4.8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.4 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **20 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Viking Pale Ale malt | 2.2 kg (54.3%) | 80 % | 5 |
| Grain | Viking malt słód pszeniczny | 0.7 kg (17.3%) | 82 % | 5 |
| Grain | Płatki owsiane | 0.5 kg (12.3%) | 85 % | 3 |
| Grain | Słód Karmelowy 150EBC | 0.15 kg (3.7%) | 75 % | 150 |
| Sugar | Milk Sugar (Lactose) | 0.5 kg (12.3%) | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 15 g | 60 min | 15.5 % |
| Aroma (end of boil) | Galaxy | 10 g | 0 min | 15 % |
| Aroma (end of boil) | Mosaic | 10 g | 0 min | 10 % |
| Aroma (end of boil) | Amarillo | 10 g | 0 min | 9.5 % |
| Dry Hop | Galaxy | 60 g | 3 day(s) | 15 % |
| Dry Hop | Mosaic | 60 g | 3 day(s) | 10 % |
| Dry Hop | Amarillo | 60 g | 3 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|-------------|-------------|---------------|-------------------|
| Safale US-05 | Ale | Dry | 17 g | Fermentis |