

# milk ipa

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **20**
- SRM **3.8**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **39.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **26.4 liter(s)** of **76C** water or to achieve **39.6 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield  | EBC |
|-------|----------------------|----------------|--------|-----|
| Grain | Viking Pale Ale malt | 1.8 kg (23.7%) | 80 %   | 5   |
| Grain | Pilznieński          | 2.9 kg (38.2%) | 81 %   | 4   |
| Grain | Oats, Flaked         | 0.5 kg (6.6%)  | 80 %   | 2   |
| Grain | Barley, Flaked       | 0.2 kg (2.6%)  | 70 %   | 4   |
| Grain | Pszeniczny           | 1 kg (13.2%)   | 85 %   | 4   |
| Grain | Biscuit Malt         | 0.2 kg (2.6%)  | 79 %   | 45  |
| Sugar | Milk Sugar (Lactose) | 1 kg (13.2%)   | 76.1 % | 0   |

## Hops

| Use for   | Name    | Amount | Time   | Alpha acid |
|-----------|---------|--------|--------|------------|
| Boil      | Magnum  | 20 g   | 60 min | 13.5 %     |
| Whirlpool | Cascade | 100 g  | 1 min  | 6 %        |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | Safale     |