

## #023 Milkshake

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **24**
- SRM **4.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **100 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

### Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount          | Yield  | EBC |
|-------|----------------------|-----------------|--------|-----|
| Grain | Viking Pale Ale malt | 3 kg (62.2%)    | 80 %   | 5   |
| Grain | Strzegom Pszeniczny  | 0.5 kg (10.4%)  | 81 %   | 6   |
| Grain | Płatki owsiane       | 0.4 kg (8.3%)   | 85 %   | 3   |
| Sugar | Milk Sugar (Lactose) | 0.52 kg (10.8%) | 76.1 % | 0   |
| Grain | Biscuit Malt         | 0.4 kg (8.3%)   | 79 %   | 45  |

### Hops

| Use for   | Name     | Amount | Time   | Alpha acid |
|-----------|----------|--------|--------|------------|
| Whirlpool | Amarillo | 30 g   | 0 min  | 8.8 %      |
| Boil      | Amarillo | 20 g   | 10 min | 8.8 %      |
| Boil      | Magnum   | 15 g   | 50 min | 13.5 %     |

### Yeasts

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

### Extras

| Type  | Name              | Amount | Use for   | Time     |
|-------|-------------------|--------|-----------|----------|
| Other | truskawki mrożone | 1800 g | Secondary | 5 day(s) |

|       |                              |      |      |       |
|-------|------------------------------|------|------|-------|
| Spice | skórka pomarańczy<br>suszona | 20 g | Boil | 5 min |
|-------|------------------------------|------|------|-------|

### Notes

- Cukier wanilinowy do refermentacji  
*Mar 22, 2018, 8:56 PM*