

Pale ale

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **39**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **35.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.8 liter(s)**

Steps

- Temp **64 C**, Time **15 min**
- Temp **73 C**, Time **60 min**
- Temp **78 C**, Time **3 min**

Mash step by step

- Heat up **23.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **60 min** at **73C**
- Keep mash **3 min** at **78C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **35.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (62.5%) | 70 % | 5 |
| Grain | Strzegom Pszeniczny | 1 kg (12.5%) | 70 % | 6 |
| Grain | Carahell | 0.3 kg (3.8%) | 70 % | 26 |
| Grain | Strzegom Pilzneński | 1 kg (12.5%) | 70 % | 4 |
| Grain | Płatki owsiane | 0.4 kg (5%) | 70 % | 3 |
| Sugar | Glukoza | 0.3 kg (3.8%) | 100 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Citra | 10 g | 60 min | 12 % |
| Boil | Columbus/Tomahawk/Zeus | 20 g | 40 min | 15.5 % |
| Aroma (end of boil) | Citra | 20 g | 5 min | 12 % |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 20 g | 5 min | 15.5 % |
| Dry Hop | Cascade | 25 g | 3 day(s) | 6 % |
| Dry Hop | Citra | 25 g | 3 day(s) | 12 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|---------------|----------------|-------------|
| Flavor | Pulpa mango | 800 g | Secondary | 5 day(s) |
| Flavor | Sok jabko+mango | 1000 g | Secondary | 5 day(s) |