

Pacific Pale Ale

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **41**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.8 liter(s)** of **76C** water or to achieve **30.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.2 kg (84%) | 80 % | 5 |
| Grain | Karmelowy Jasny 30EBC | 0.3 kg (6%) | 75 % | 30 |
| Grain | Płatki owsiane | 0.25 kg (5%) | 85 % | 3 |
| Grain | Płatki pszeniczne | 0.25 kg (5%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------|--------|----------|------------|
| Boil | Waimea | 10 g | 60 min | 14.3 % |
| Boil | Simcoe | 25 g | 20 min | 12.1 % |
| Whirlpool | Simcoe | 25 g | 30 min | 12.1 % |
| Dry Hop | Simcoe | 50 g | 3 day(s) | 12.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Slant | 200 ml | Mangrove Jack's |