

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