

# EPA! EPA!

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **22**
- SRM **4.7**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **58 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.3 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Vienna Malt	1 kg (21.1%)	79 %	7
Grain	Viking Pale Ale malt	2.5 kg (52.6%)	80 %	5
Grain	Viking Wheat Malt	1 kg (21.1%)	83 %	5
Grain	Viking melanoidynowy	0.25 kg (5.3%)	75 %	60

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	20 min	12 %
Boil	Citra	20 g	10 min	12 %
Aroma (end of boil)	Sybilla	15 g	8 min	3.5 %
Aroma (end of boil)	Sybilla	20 g	3 min	3.5 %
Aroma (end of boil)	Citra	10 g	0 min	12 %
Dry Hop	Citra	50 g	7 day(s)	12 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Mangrove Jack's M44 US West Coast	Ale	Dry	10 g	Mangrove Jack's