

# single hop warrior APA 12 blg

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **25**
- SRM **5.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **27.3 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **77 C**, Time **20 min**

## Mash step by step

- Heat up **20.8 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **20 min** at **77C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (46.2%)	80 %	5
Grain	Viking Pilsner malt	2 kg (30.8%)	82 %	4
Grain	Viking Munich Malt	0.5 kg (7.7%)	78 %	18
Grain	Viking Wheat Malt	0.5 kg (7.7%)	83 %	5
Grain	Viking Vienna Malt	0.5 kg (7.7%)	79 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	60 min	15.6 %
Boil	Warrior	10 g	15 min	15.6 %
Aroma (end of boil)	Warrior	10 g	1 min	15.6 %
Dry Hop	Warrior	30 g	3 day(s)	15.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	12 g	LA FARGE