

sour ale

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **30**
- SRM **3.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **17.2 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (81.6%)	80 %	5
Grain	Rice, Flaked	0.4 kg (8.2%)	70 %	2
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Grain	Viking Wheat Malt	0.5 kg (10.2%)	83 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	10 g	60 min	13.2 %
Aroma (end of boil)	Simcoe	10 g	15 min	13.2 %
Aroma (end of boil)	Simcoe	10 g	10 min	13.2 %
Aroma (end of boil)	Simcoe	20 g	5 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lactobacillus Plantarum	Ale	Dry	5 g	Sanprobi ibs
Wyeast - American Ale	Ale	Liquid	100 ml	Wyeast Labs