

## sour 1

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **9**
- SRM **4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (60%)	80 %	5
Grain	Viking Pilsner malt	1 kg (20%)	82 %	4
Grain	Pszeniczny	1 kg (20%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	5 g	60 min	15.5 %
Whirlpool	Amarillo	5 g	1 min	8.8 %
Whirlpool	Mosaic	20 g	1 min	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	400 g	Safale

### Extras

Type	Name	Amount	Use for	Time
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Flavor	Pulpa mango	1600 g	Secondary	10 day(s)
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