

# Sour summer pale ale

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **4.1**

## Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **39.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **45.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **36.4 liter(s)**

## Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **4 min**

## Mash step by step

- Heat up **27.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **4 min** at **76C**
- Sparge using **27.4 liter(s)** of **76C** water or to achieve **45.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7.5 kg (82.4%)	80 %	5
Grain	Weyermann - Carapils	1 kg (11%)	78 %	4
Grain	Płatki owsiane	0.5 kg (5.5%)	60 %	3
Grain	Karmelowy Jasny 30EBC	0.1 kg (1.1%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	8.7 %
Aroma (end of boil)	Marynka	20 g	10 min	8.7 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	10 min	4 %
Whirlpool	Lublin (Lubelski)	100 g	0 min	4 %
Whirlpool	Zula	50 g	0 min	8.3 %