

# Ragnarok

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **6**
- SRM **3.6**
- Style **Saison**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **69 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **90 min** at **69C**
- Keep mash **10 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	4.8 kg (100%)	81 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Saaz (Czech Republic)	25 g	100 min	4.5 %
Boil	Saaz (Czech Republic)	25 g	15 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Liquid	50 ml	FM

## Extras

Type	Name	Amount	Use for	Time
Spice	jagody jałowca	25 g	Mash	90 min
Spice	jagody jałowca	25 g	Boil	70 min