

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 |