

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **72**
- SRM **3.3**

Batch size

- Expected quantity of finished beer **42 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **60.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **31.5 liter(s)**
- Total mash volume **40.5 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **31.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **0 min** at **78C**
- Sparge using **37.9 liter(s)** of **76C** water or to achieve **60.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (55.6%)	80 %	5
Grain	Viking Pilsner malt	3 kg (33.3%)	82 %	4
Grain	Oats, Flaked	1 kg (11.1%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	100 g	60 min	10.6 %
Aroma (end of boil)	hellertauer magnum	100 g	1 min	11.8 %
Boil	Centennial	100 g	10 min	9 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	200 ml	---