

## freestyle

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **34**
- SRM **10.4**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **4 %**
- Size with trub loss **27 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **31.6 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **25.8 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **20.6 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (97.1%)	80 %	5
Grain	Carafa II	0.15 kg (2.9%)	70 %	812

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galena	10 g	30 min	14.1 %
Boil	Galena	20 g	20 min	14.1 %
Boil	Galena	20 g	10 min	14.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	100 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Herb	Werbena cytrynowa	15 g	Boil	10 min
Fining	Whirlfloc	1 g	Boil	5 min