

## #23

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **99**
- SRM **4.3**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.8 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (59.5%)	80 %	5
Grain	Viking Wheat Malt	1.7 kg (40.5%)	83 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	55 min	12.1 %
Boil	Columbus/Tomahawk/Zeus	5 g	55 min	14.6 %
Whirlpool	Amarillo	25 g	30 min	9.5 %
Whirlpool	Citra	25 g	30 min	12 %
Whirlpool	Simcoe	25 g	30 min	13.2 %
Dry Hop	Amarillo	25 g	2 day(s)	9.5 %
Dry Hop	Citra	25 g	2 day(s)	12 %
Dry Hop	Simcoe	25 g	2 day(s)	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	8 g	Fermentis