

# W34/70 tettnager

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **39**
- SRM **3.9**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **56 liter(s)**
- Trub loss **2 %**
- Size with trub loss **57.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **6 %/h**
- Boil size **65.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **44 liter(s)**

## Steps

- Temp **65 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **33 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **15 min** at **65C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **43.3 liter(s)** of **76C** water or to achieve **65.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	8.5 kg (77.3%)	82 %	4
Grain	Viking Munich Malt	1 kg (9.1%)	78 %	18
Grain	Viking Carabody Malt	1 kg (9.1%)	78 %	8
Grain	Weyermann - Acidulated Malt	0.5 kg (4.5%)	80 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	100 g	50 min	5.2 %
Aroma (end of boil)	Tettnang	100 g	10 min	5.2 %
Whirlpool	Tettnang	150 g	20 min	5.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	700 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc	3 g	Boil	10 min
Water Agent	ZnCl <sub>2</sub>	6 g	Boil	1 min