

## W34/70 Harmonie/Saaz nowe

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **40**
- SRM **3.9**
- Style **Bohemian Pilsener**

### Batch size

- Expected quantity of finished beer **54 liter(s)**
- Trub loss **2 %**
- Size with trub loss **55.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **67.6 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 **20 min**
- Temp **72 C**, Time **40 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 **20 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **45.6 liter(s)** of **76C** water or to achieve **67.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	9 kg (81.8%)	82 %	4
Grain	Viking Munich Malt	1 kg (9.1%)	78 %	18
Grain	Viking Carabody Malt	1 kg (9.1%)	78 %	8

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Harmonie	75 g	50 min	9 %
Aroma (end of boil)	Saaz (Czech Republic)	100 g	20 min	3.2 %
Whirlpool	Saaz (Czech Republic)	100 g	20 min	3.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	66 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	Kwas fosforowy 75%	9 g	Mash	70 min
Water Agent	Chlorek wapnia ml	5 g	Mash	70 min
Water Agent	Gips piwowarski	10 g	Mash	70 min
Fining	Whirfloc	3 g	Boil	12 min