

## Lager OPT 4

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **17**
- SRM **3.6**
- Style **Standard American Lager**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **54 C**, Time **20 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **58.8C**
- Add grains
- Keep mash **20 min** at **54C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński Jasny Optima	5 kg (90.9%)	81 %	4
Grain	Bestmalz Carmel Pils	0.5 kg (9.1%)	75 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Brewers Gold	30 g	60 min	4.5 %
Aroma (end of boil)	Hersbrucker	25 g	10 min	4.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	100 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirflfloc	1 g	Boil	10 min

### Notes

- Zmiana wody

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

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