

## Lager OPT 5

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **22**
- SRM **3.4**
- Style **Standard American Lager**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 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 **17.9 liter(s)** of **76C** water or to achieve **31.7 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	Hallertau Blanc	20 g	50 min	9.8 %
Aroma (end of boil)	Tradition	25 g	10 min	5.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11 g	Fermentis Division of S.I.Lesaffre

### Extras

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