

## #13 American Lager

- Gravity **9.5 BLG**
- ABV ---
- IBU **43**
- SRM **3**
- Style **Standard American Lager**

### Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **47.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **57 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.3 liter(s)**
- Total mash volume **31 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **23.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **41.5 liter(s)** of **76C** water or to achieve **57 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	6 kg (77.4%)	81 %	4
Grain	Weyermann - Carapils	1.75 kg (22.6%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	20 g	60 min	6.7 %
Boil	Citra	20 g	30 min	13.5 %
Boil	Cascade	30 g	30 min	6.7 %
Boil	Citra	30 g	10 min	13.5 %
Boil	Amarillo	25 g	10 min	8 %
Dry Hop	Citra	50 g	0 day(s)	13.5 %
Dry Hop	Amarillo	25 g	0 day(s)	8 %

### Yeasts

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

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	10 g	Boil	15 min