

# amerikan lager

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **24**
- SRM **3.5**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (75.5%)	82 %	4
Grain	Karamel Pils Steinbach	0.8 kg (15.1%)	79 %	6
Adjunct	ryż	0.5 kg (9.4%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	8.5 %
Boil	Lublin (Lubelski)	15 g	20 min	3.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	---