

# American Lager

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **12**
- SRM **3.9**
- Style **Standard American Lager**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **33.1 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **31.2 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **24.9 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **20 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - Pilsen Malt	5 kg (80.3%)	80.5 %	4
Grain	Castle Malting - Cara Blonde	0.23 kg (3.7%)	78 %	20
Grain	Castlemalting - Pilsen Malt	1 kg (16.1%)	80.5 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Citra	10 g	60 min	12 %
Dry Hop	Zappa	50 g	7 day(s)	4.2 %
Dodany podczas intensywnej pracy drożdży				
Dry Hop	Citra	25 g	7 day(s)	12 %
Dodany podczas intensywnej pracy drożdży				

## Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M54 Californian Lager	Lager	Dry	11 g	Mangrove Jack's
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### Extras

Type	Name	Amount	Use for	Time
Fining	whirlflock	1.25 g	Boil	15 min
Water Agent	kwas fosforowy	4 g	Boil	60 min

### Notes

- Woda 50/50 kranówka ze zdeminalizowaną  
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