

# American Lager #135

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **25**
- SRM **3.2**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.5 liter(s)**

## Mash information

- Mash efficiency **88 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **45 C**, Time **15 min**
- Temp **53 C**, Time **10 min**
- Temp **65 C**, Time **50 min**

## Mash step by step

- Heat up **13 liter(s)** of strike water to **49.8C**
- Add grains
- Keep mash **15 min** at **45C**
- Keep mash **10 min** at **53C**
- Keep mash **50 min** at **65C**
- Sparge using **23.5 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking - pilzneński	4.4 kg (88%)	82 %	4
Grain	Weyermann - Carapils	0.3 kg (6%)	78 %	4
Grain	Weyermann - zakwaszający	0.3 kg (6%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Lubelski	100 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Slant	250 ml	---

## Extras

Type	Name	Amount	Use for	Time
Other	Brewferm Hop Extract citrulicious	20 g	Secondary	14 day(s)