

# lager

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- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **20**
- SRM **3.9**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **17.5 liter(s)**

## Steps

- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **14 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **25 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (100%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Boil	Lublin (Lubelski)	20 g	15 min	4 %
Boil	Lublin (Lubelski)	10 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s-23	Lager	Dry	11.5 g	---

## Notes

- 10dni burzliwa  
14dni cicha  
7dni gazowanie  
minimum 14 dni piwnica  
*Feb 25, 2018, 8:32 PM*