

# Lager lutowy

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU ---
- SRM **4**
- Style **Bohemian Pilsener**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

## Steps

- Temp **54 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.7 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.5 kg (91.8%)	80 %	4
Grain	Weyermann - Carapils	0.3 kg (6.1%)	78 %	4
Grain	Weyermann - Caraamber	0.1 kg (2%)	75 %	65

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Marynka	30 g	70 min	10 %
Mash	Lublin (Lubelski)	30 g	20 min	4 %
Aroma (end of boil)	Saaz (Czech Republic)	30 g	0 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale