

# Potrzanowski lager II

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **28**
- SRM **4.5**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **101.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **72 liter(s)**
- Total mash volume **90 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **72 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **47.2 liter(s)** of **76C** water or to achieve **101.2 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount        | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Pilzneński            | 14 kg (77.8%) | 81 %  | 4   |
| Grain | Monachijski           | 2 kg (11.1%)  | 80 %  | 16  |
| Grain | Pszeniczny            | 1 kg (5.6%)   | 85 %  | 4   |
| Grain | Karmelowy Jasny 30EBC | 1 kg (5.6%)   | 75 %  | 30  |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Chinook | 100 g  | 60 min | 9 %        |
| Aroma (end of boil) | krystal | 100 g  | 10 min | 3 %        |