

## Lager OPT 3

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **19**
- SRM **3.8**
- Style **Standard American Lager**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

### Steps

- Temp **54 C**, Time **20 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **17.7 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **20 min** at **54C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

| Type  | Name                    | Amount        | Yield  | EBC |
|-------|-------------------------|---------------|--------|-----|
| Grain | Pilzneński Jasny Optima | 5 kg (84.7%)  | 81 %   | 4   |
| Grain | Bestmalz Carmel Pils    | 0.5 kg (8.5%) | 75 %   | 5   |
| Grain | Ryż                     | 0.4 kg (6.8%) | 78.3 % | 4   |

### Hops

| Use for             | Name         | Amount | Time   | Alpha acid |
|---------------------|--------------|--------|--------|------------|
| Boil                | Brewers Gold | 30 g   | 60 min | 4.5 %      |
| Aroma (end of boil) | Hersbrucker  | 25 g   | 20 min | 4.3 %      |

### Yeasts

| Name             | Type  | Form  | Amount | Laboratory |
|------------------|-------|-------|--------|------------|
| Saflager W 34/70 | Lager | Slant | 100 ml | Fermentis  |

### Extras

| Type   | Name       | Amount | Use for | Time   |
|--------|------------|--------|---------|--------|
| Fining | Whirflfloc | 1 g    | Boil    | 10 min |

### Notes

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

- kwiatki  
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