

## Lager OPT 5

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **22**
- SRM **3.4**
- Style **Standard American Lager**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 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 **19.3 liter(s)** of strike water to **58.8C**
- Add grains
- Keep mash **20 min** at **54C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type  | Name                    | Amount        | Yield | EBC |
|-------|-------------------------|---------------|-------|-----|
| Grain | Pilzneński Jasny Optima | 5 kg (90.9%)  | 81 %  | 4   |
| Grain | Bestmalz Carmel Pils    | 0.5 kg (9.1%) | 75 %  | 5   |

### Hops

| Use for             | Name            | Amount | Time   | Alpha acid |
|---------------------|-----------------|--------|--------|------------|
| Boil                | Hallertau Blanc | 20 g   | 50 min | 9.8 %      |
| Aroma (end of boil) | Tradition       | 25 g   | 10 min | 5.4 %      |

### Yeasts

| Name          | Type  | Form | Amount | Laboratory                         |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry  | 11 g   | Fermentis Division of S.I.Lesaffre |

### Extras

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