

# Arctic lager

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **32**
- SRM **4.1**
- Style **Dortmunder Export**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **37.4 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

## Steps

- Temp **50 C**, Time **20 min**
- Temp **67 C**, Time **45 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **45 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **23.9 liter(s)** of **76C** water or to achieve **37.4 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 4.1 kg (75.9%) | 85 %  | 6   |
| Grain | Weyermann - Vienna Malt   | 0.7 kg (13%)   | 81 %  | 7   |
| Grain | Carahell                  | 0.3 kg (5.6%)  | 77 %  | 26  |
| Grain | Weyermann - Carapils      | 0.3 kg (5.6%)  | 78 %  | 4   |

## Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Simcoe                | 9 g    | 60 min | 13.4 %     |
| Boil    | Summit                | 14 g   | 60 min | 15.8 %     |
| Boil    | Tettnanger            | 20 g   | 20 min | 3.7 %      |
| Boil    | Hallertau mittelfruer | 36 g   | 5 min  | 3 %        |

## Yeasts

| Name          | Type  | Form | Amount | Laboratory                         |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry  | 11.5 g | Fermentis Division of S.I.Lesaffre |

## Extras

| Type        | Name | Amount | Use for | Time  |
|-------------|------|--------|---------|-------|
| Water Agent | gips | 15 g   | Mash    | 0 min |