

Arctic lager

- 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 |