Arctic lager

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **4.4**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **0 %**
- Size with trub loss **27 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **33.4 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 **19.9 liter(s)** of **76C** water or to achieve **33.4 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	Simco	20 g	60 min	13.4 %
Boil	Hallertau mittelfruer	20 g	20 min	3 %
Boil	Hallertau mittelfruer	30 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

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

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