

Ciemny Lager

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **19**
- SRM **22**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.6 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **69C**
- Keep mash **1 min** at **78C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.2 kg (46.3%)	81 %	4
Grain	Strzegom Wiedeński	2.2 kg (46.3%)	79 %	10
Grain	Carafa II	0.25 kg (5.3%)	70 %	1100
Grain	Fawcett - Pale Chocolate	0.1 kg (2.1%)	71 %	600

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Kveik Lutra	Ale	Slant	300 ml	---