

Ciemny Lager

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **25**
- SRM **13.4**
- Style **Dark American Lager**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **21 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **1.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Pilzneński | 2.5 kg (71.3%) | 81 % | 4 |
| Grain | Strzegom Monachijski typ II | 0.5 kg (14.3%) | 79 % | 22 |
| Grain | Karmelowy żytni Strzegom | 0.5 kg (14.3%) | 75 % | 150 |
| Grain | Strzegom Barwiący | 0.005 kg (0.1%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------------------|--------|--------|------------|
| Boil | Herkules | 5 g | 60 min | 17 % |
| Boil | Hallertau Mittelfruh | 10 g | 30 min | 3 % |
| Boil | Hallertau Mittelfruh | 10 g | 15 min | 3 % |
| Aroma (end of boil) | Hallertau Mittelfruh | 10 g | 30 min | 3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|-------|--------|------------|
| Saflager W 34/70 | Lager | Slant | 50 ml | Fermentis |

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 |
|--------|------------|--------|---------|--------|
| Fining | whirlflock | 2 g | Boil | 15 min |