Klon ksiazece Ciemne lagodne

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **24**
- SRM **31.7**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **30 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **75.1C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **30 min** at **72C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	2 kg *(33.3%)*	79 %	22
Grain	Pilzneński	3 kg *(50%)*	81 %	4
Grain	Strzegom Karmel 300	0.5 kg *(8.3%)*	70 %	299
Grain	Strzegom Czekoladowy 1200	0.4 kg *(6.7%)*	68 %	1202
Grain	Jęczmień palony	0.1 kg *(1.7%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Marynka	15 g	5 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	500 ml	Fermentis

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