

Klon ksiazecze Ciemne lagodne

- Gravity **11.9 BLG**
- ABV ---
- IBU **20**
- SRM **33.7**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **5 min**
- Evaporation rate **10 %/h**
- Boil size **23.2 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **69 C**, Time **50 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **75.1C**
- Add grains
- Keep mash **50 min** at **69C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **23.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski Ciemny Steinbach	2 kg (47.1%)	80 %	30
Grain	Caraaroma	1.5 kg (35.3%)	78 %	400
Grain	Pilzneński	0.5 kg (11.8%)	81 %	4
Sugar	Cukier palony	0.25 kg (5.9%)	100 %	100

Hops

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

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	34.5 g	Fermentis