

Ciemniuszek kuzynek

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **26**
- SRM **32.7**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **14.6 liter(s)**
- Total mash volume **19.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.6 liter(s)** of strike water to **74.6C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (63.8%)	82 %	4
Grain	Monachijski	1 kg (21.3%)	80 %	16
Grain	Viking Czekoladowy ciemny	0.5 kg (10.6%)	67 %	800
Grain	Jęczmień palony	0.2 kg (4.3%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	60 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	23 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc	1 g	Boil	10 min