

# kelner

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **43**
- SRM **26.6**
- Style **Sweet Stout**

## 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 **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

## Steps

- Temp **68.5 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **75.5C**
- Add grains
- Keep mash **75 min** at **68.5C**
- Keep mash **5 min** at **78C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.7 kg (62.8%)	80 %	5
Grain	Strzegom Monachijski typ II	1 kg (23.3%)	79 %	22
Grain	Czekoladowy	0.25 kg (5.8%)	60 %	788
Grain	Fawcett - Pale Chocolate	0.25 kg (5.8%)	71 %	600
Grain	Weyermann - Carafa III specjal	0.1 kg (2.3%)	70 %	1024

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Boil	Magnum	10 g	30 min	13.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	12 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Flavor	laktoza	540 g	Boil	5 min
Flavor	ziarna kakaowca	100 g	Secondary	14 day(s)