

## takie ciemne

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **27**
- SRM **34.7**
- 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 **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **20 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	viking golden ale	4.5 kg (76.3%)	80 %	10
Grain	karmelowy 300 Viking Malt	0.5 kg (8.5%)	70 %	300
Grain	czekoladowy ciemny Viking Malt	0.4 kg (6.8%)	80 %	1300
Sugar	laktoza	0.5 kg (8.5%)	100 %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	35 g	60 min	5.8 %
Aroma (end of boil)	Challenger	20 g	20 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Fining	irish moss	5 g	Boil	10 min
Other	płatki dębowe	50 g	Secondary	---