

## Stout czekoladowy

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **51**
- SRM **28.5**
- Style **Dry 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 **60 %**
- Liquor-to-grist ratio **2.75 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **29.3 liter(s)**

### Steps

- Temp **66 C**, Time **75 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **21.5 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.6 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	5 kg (64.1%)	80 %	5
Grain	Strzegom Monachijski typ I	2 kg (25.6%)	79 %	16
Grain	Karmelowy Jasny 30EBC	0.2 kg (2.6%)	75 %	30
Grain	Strzegom Karmel 150	0.2 kg (2.6%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.2 kg (2.6%)	68 %	1200
Grain	Jęczmień palony	0.2 kg (2.6%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	9.1 %
Boil	Lublin (Lubelski)	25 g	15 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Gozdawa - Pure Ale Yeast 7	Ale	Slant	100 ml	Gozdawa
----------------------------	-----	-------	--------	---------

### Extras

Type	Name	Amount	Use for	Time
Flavor	Łuska kakaowca	150 g	Secondary	5 day(s)
Flavor	Łuska kakaowca	50 g	Boil	10 min