

## Czarno to widzę

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **34**
- SRM **28.5**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

### Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **15.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **15 min** at **72C**
- Sparge using **18.6 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (57.7%)	80 %	5
Grain	Strzegom Czekoladowy ciemny	0.25 kg (4.8%)	68 %	1200
Grain	Karmelowy Jasny 30EBC	0.25 kg (4.8%)	75 %	30
Grain	Strzegom Barwiący	0.2 kg (3.8%)	68 %	1300
Grain	Strzegom Monachijski typ II	1.5 kg (28.8%)	79 %	22

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Wolf	30 g	60 min	11.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis