

## czarne lekkie #8

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **32**
- SRM **24.6**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **150 min**
- Evaporation rate **10 %/h**
- Boil size **43.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

### Steps

- Temp **45 C**, Time **50 min**
- Temp **66 C**, Time **80 min**
- Temp **75 C**, Time **20 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **50 min** at **45C**
- Keep mash **80 min** at **66C**
- Keep mash **20 min** at **75C**
- Sparge using **30.5 liter(s)** of **76C** water or to achieve **43.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	3.5 kg (55.6%)	80 %	7
Grain	Płatki orkiszowe	0.5 kg (7.9%)	80 %	4
Grain	Viking Malt Wędzony Czereśnią	1 kg (15.9%)	82 %	10
Grain	Żytni	0.5 kg (7.9%)	85 %	8
Grain	Simpsons - Roasted Barley	0.2 kg (3.2%)	70 %	1084
Grain	Strzegom Karmel 150	0.2 kg (3.2%)	75 %	150
Grain	Strzegom Karmel 600	0.2 kg (3.2%)	68 %	601
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.2%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	55 g	15 min	15 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
FM53 Voss kveik	Ale	Liquid	30 ml	FM