

## 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<br>Wędzony Czereśnią | 1 kg (15.9%)   | 82 %  | 10   |
| Grain | Żytni                            | 0.5 kg (7.9%)  | 85 %  | 8    |
| Grain | Simpsons - Roasted<br>Barley     | 0.2 kg (3.2%)  | 70 %  | 1084 |
| Grain | Strzegom Karmel<br>150           | 0.2 kg (3.2%)  | 75 %  | 150  |
| Grain | Strzegom Karmel<br>600           | 0.2 kg (3.2%)  | 68 %  | 601  |
| Grain | Strzegom<br>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                |