

## 18# Czarna Osiemnastka

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **32**
- SRM **38.9**
- Style **Sweet 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 **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

### Steps

- Temp **55 C**, Time **1 min**
- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **3 min**

### Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **1 min** at **55C**
- Keep mash **60 min** at **67C**
- Keep mash **3 min** at **78C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount       | Yield | EBC |
|-------|---------------------|--------------|-------|-----|
| Grain | Czekoladowy         | 1 kg (14.3%) | 60 %  | 800 |
| Grain | Barley, Torrefied   | 5 kg (71.4%) | 79 %  | 4   |
| Grain | Strzegom Karmel 150 | 1 kg (14.3%) | 75 %  | 150 |

### Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Chinook | 20 g   | 60 min   | 7.6 %      |
| Boil    | Chinook | 20 g   | 30 min   | 7.6 %      |
| Boil    | Chinook | 20 g   | 10 min   | 7.6 %      |
| Boil    | Chinook | 20 g   | 5 min    | 7.6 %      |
| Dry Hop | Chinook | 20 g   | 7 day(s) | 7.6 %      |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |