

# Jet Black

- Gravity **15.4 BLG**
- ABV ---
- IBU **53**
- SRM **62.8**
- Style **Oatmeal Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **28.3 liter(s)**

## Steps

- Temp **65 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **22 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **75 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount         | Yield  | EBC  |
|-------|----------------------------------|----------------|--------|------|
| Grain | Simpsons - Maris Otter           | 3.44 kg (51%)  | 80.3 % | 6    |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.31 kg (4.6%) | 73 %   | 1001 |
| Grain | Fawcett - Dark Crystal           | 0.24 kg (3.6%) | 71 %   | 300  |
| Grain | Brown Malt (British Chocolate)   | 0.47 kg (7%)   | 71.9 % | 185  |
| Grain | Black (Patent) Malt              | 0.24 kg (3.6%) | 70 %   | 1100 |
| Grain | Weyermann - Carafo I             | 0.24 kg (3.6%) | 65 %   | 900  |
| Grain | Fawcett - Pale Chocolate         | 0.31 kg (4.6%) | 71 %   | 600  |
| Grain | Crystal 150                      | 0.31 kg (4.6%) | 73.5 % | 160  |
| Grain | Oats, Flaked                     | 0.47 kg (7%)   | 80 %   | 4    |
| Grain | Acid Malt                        | 0.25 kg (3.7%) | 70 %   | 4.5  |
| Sugar | Milk Sugar (Lactose)             | 0.47 kg (7%)   | 76.1 % | 0    |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------|--------|------|------------|
|---------|------|--------|------|------------|

|      |             |      |        |        |
|------|-------------|------|--------|--------|
| Boil | Magnum      | 30 g | 60 min | 11.5 % |
| Boil | Sorachi Ace | 30 g | 25 min | 12.5 % |

## Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 50 ml  | Fermentum Mobile |

## Extras

| Type   | Name                | Amount | Use for | Time   |
|--------|---------------------|--------|---------|--------|
| Fining | Mech irlandzki      | 5 g    | Boil    | 15 min |
| Other  | Pożywka dla drożdży | 3 g    | Boil    | 10 min |