

## # Black IPA

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **65**
- SRM **28.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **28.6 liter(s)**

### Steps

- Temp **66 C**, Time **90 min**

### Mash step by step

- Heat up **22.6 liter(s)** of strike water to **72.1C**
- Add grains
- Keep mash **90 min** at **66C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC  |
|-------|---------------------|----------------|-------|------|
| Grain | Pilzneński          | 5 kg (80%)     | 81 %  | 4    |
| Grain | Strzegom Karmel 150 | 0.15 kg (2.4%) | 75 %  | 150  |
| Grain | Carafa II specjal   | 0.5 kg (8%)    | 65 %  | 1200 |
| Grain | Biscuit Malt        | 0.3 kg (4.8%)  | 79 %  | 45   |
| Sugar | Brown Sugar, Light  | 0.3 kg (4.8%)  | 100 % | 16   |

### Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Marynka | 60 g   | 60 min   | 8.8 %      |
| Boil    | Cascade | 25 g   | 45 min   | 6.7 %      |
| Boil    | Fuggles | 25 g   | 15 min   | 6.1 %      |
| Boil    | Cascade | 25 g   | 0 min    | 6.7 %      |
| Dry Hop | Cascade | 50 g   | 4 day(s) | 6.7 %      |
| Dry Hop | Fuggles | 25 g   | 4 day(s) | 4.5 %      |

### Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 200 ml | Fermentum Mobile |