

## Black IPA nr. 2

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **58**
- SRM **33.5**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC  |
|-------|-----------------------------|---------------|-------|------|
| Grain | Maris Otter Crisp Pale Ale  | 5 kg (76.9%)  | 83 %  | 6.5  |
| Grain | Weyermann pszeniczny jasny  | 1 kg (15.4%)  | 80 %  | 4    |
| Grain | Weyermann - Carafa III      | 0.3 kg (4.6%) | 70 %  | 1400 |
| Grain | Weyermann - Chocolate Wheat | 0.2 kg (3.1%) | 74 %  | 1100 |

### Hops

| Use for             | Name           | Amount | Time     | Alpha acid |
|---------------------|----------------|--------|----------|------------|
| Boil                | Centennial     | 25 g   | 60 min   | 8.9 %      |
| Boil                | Simcoe         | 20 g   | 30 min   | 14.4 %     |
| Boil                | Chinook        | 20 g   | 30 min   | 11.1 %     |
| Boil                | Mech irlandzki | 5 g    | 10 min   | 1 %        |
| Aroma (end of boil) | Simcoe         | 30 g   | 0 min    | 14.4 %     |
| Aroma (end of boil) | Chinook        | 30 g   | 0 min    | 11.1 %     |
| Dry Hop             | Simcoe         | 50 g   | 2 day(s) | 14.4 %     |
| Dry Hop             | Chinook        | 50 g   | 2 day(s) | 11.1 %     |