

# american dark rye ale

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **54**
- SRM **30.3**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

## Steps

- Temp **67 C**, Time **80 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield | EBC  |
|-------|--------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt           | 3.8 kg (70.4%) | 80 %  | 5    |
| Grain | Żytni                          | 1 kg (18.5%)   | 85 %  | 8    |
| Grain | Strzegom<br>Czekoladowy ciemny | 0.2 kg (3.7%)  | 68 %  | 1200 |
| Grain | Carafa III                     | 0.2 kg (3.7%)  | 70 %  | 1034 |
| Grain | Pszeniczny<br>Czekoladowy      | 0.2 kg (3.7%)  | 73 %  | 1001 |

## Hops

| Use for | Name                   | Amount | Time     | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 15 g   | 60 min   | 15.5 %     |
| Boil    | Rakau (NZ)             | 25 g   | 15 min   | 9.5 %      |
| Boil    | Citra                  | 25 g   | 15 min   | 13.3 %     |
| Boil    | Citra                  | 25 g   | 3 min    | 13.3 %     |
| Boil    | Rakau (NZ)             | 25 g   | 3 min    | 9.5 %      |
| Dry Hop | Rakau (NZ)             | 50 g   | 5 day(s) | 9.5 %      |
| Dry Hop | Simcoe                 | 50 g   | 5 day(s) | 13.2 %     |

## Yeasts

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale         | Dry         | 11 g          | ---               |

### **Extras**

| <b>Type</b> | <b>Name</b>                | <b>Amount</b> | <b>Use for</b> | <b>Time</b> |
|-------------|----------------------------|---------------|----------------|-------------|
| Fining      | mech irlandzki             | 5 g           | Boil           | 10 min      |
| Flavor      | zest cytryna bio i limonka | 50 g          | Boil           | 5 min       |