

## Darth Vader - Black IPA

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **57**
- SRM **23.9**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **15 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.2 liter(s)**

### Mash information

- Mash efficiency **88 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.5 liter(s)**
- Total mash volume **26.3 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**

### Mash step by step

- Heat up **20.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount          | Yield | EBC |
|-------|--------------------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt           | 5 kg (82.8%)    | 80 %  | 5   |
| Grain | Strzegom Karmel 150            | 0.1 kg (1.7%)   | 75 %  | 150 |
| Grain | Weyermann - Dehusked Carafa II | 0.5 kg (8.3%)   | 70 %  | 837 |
| Grain | Biscuit Malt                   | 0.25 kg (4.1%)  | 79 %  | 45  |
| Sugar | trzciny                        | 0.192 kg (3.2%) | --- % | --- |

### Hops

| Use for | Name     | Amount | Time     | Alpha acid |
|---------|----------|--------|----------|------------|
| Boil    | Marynka  | 25 g   | 60 min   | 10 %       |
| Boil    | Amarillo | 20 g   | 45 min   | 9.2 %      |
| Boil    | Amarillo | 25 g   | 15 min   | 9.5 %      |
| Boil    | Simcoe   | 20 g   | 15 min   | 13.2 %     |
| Boil    | Simcoe   | 30 g   | 0 min    | 13.2 %     |
| Dry Hop | Cascade  | 50 g   | 3 day(s) | 6 %        |

### Yeasts

| Name                 | Type | Form  | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale  | Slant | 666 ml | Danstar    |