

Darth Vader - Black IPA

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **42**
- SRM **23.7**
- 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 **80 %**
- 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 | Pilzneński | 5 kg (82%) | 81 % | 4 |
| Grain | Strzegom Karmel 150 | 0.1 kg (1.6%) | 75 % | 150 |
| Grain | Weyermann - Dehusked Carafa II | 0.5 kg (8.2%) | 70 % | 837 |
| Grain | Biscuit Malt | 0.25 kg (4.1%) | 79 % | 45 |
| Sugar | brązowy | 0.25 kg (4.1%) | --- % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Centennial | 25 g | 60 min | 10.5 % |
| Boil | Cascade | 25 g | 45 min | 6 % |
| Boil | Willamette | 25 g | 15 min | 5 % |
| Boil | Cascade | 25 g | 0 min | 6 % |
| Dry Hop | Cascade | 50 g | 3 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 999 ml | Fermentis |