

## #20 Darth Vader Cascade Ekstrakt

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **68**
- SRM **32.5**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **13.3 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.6 liter(s)**
- Total mash volume **8.8 liter(s)**

### Steps

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

### Mash step by step

- Heat up **6.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **13.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	0.3 kg (9.4%)	80 %	5
Grain	Strzegom Karmel 150	0.05 kg (1.6%)	75 %	180
Grain	Carafa II	0.25 kg (7.8%)	70 %	1150
Carafa II special, bez łuski				
Grain	Biscuit Malt	0.15 kg (4.7%)	79 %	50
Liquid Extract	Bruntal Pale Ale	1 kg (31.3%)	80 %	35
Grain	Strzegom Monachijski typ I	0.8 kg (25%)	79 %	16
Grain	Weyermann pszeniczny jasny	0.65 kg (20.3%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	8.4 %
Na goryczkę do 65 IBU				
Boil	Cascade	15 g	15 min	7.6 %
Boil	Cascade	15 g	10 min	7.6 %
Boil	Cascade	15 g	1 min	7.6 %
Dry Hop	Cascade	25 g	4 day(s)	7.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Slant	62.86 ml	Fermentis