

# 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