

## [17 Brew Crew] 17 Black IPA

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **39**
- SRM **28.2**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **15 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **75C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	2.5 kg (45.9%)	80 %	4
Grain	Fawcett - Maris Otter Pale	2 kg (36.7%)	80 %	6
Grain	Weyermann - Carafa III	0.25 kg (4.6%)	70 %	1024
Grain	Fawcett - Pszeniczny Czekoladowy	0.25 kg (4.6%)	73 %	1001
Grain	Weyermann Caramunich 3	0.15 kg (2.8%)	76 %	150
Sugar	Cukier	0.3 kg (5.5%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	60 min	13.2 %
Boil	Amarillo	30 g	5 min	9.5 %
Boil	Mosaic	30 g	5 min	10 %
Aroma (end of boil)	Simcoe	60 g	0 min	13.2 %
Aroma (end of boil)	Amarillo	60 g	0 min	9.5 %

Aroma (end of boil)	Mosaic	60 g	0 min	10 %
Dry Hop	Simcoe	60 g	4 day(s)	13.2 %
Dry Hop	Amarillo	60 g	4 day(s)	9.5 %
Dry Hop	Mosaic	60 g	4 day(s)	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-05	Ale	Dry	11 g	Safale