

# Black IPA

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **51**
- SRM **23.3**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.7 liter(s)**
- Total mash volume **29.2 liter(s)**

## Steps

- Temp **61 C**, Time **60 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **22.7 liter(s)** of strike water to **66.9C**
- Add grains
- Keep mash **60 min** at **61C**
- Keep mash **20 min** at **70C**
- Keep mash **0 min** at **78C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.2 kg (49.2%)	85 %	7
Grain	Weyermann - Pilsner Malt	2.4 kg (36.9%)	81 %	5
Grain	Płatki orkiszowe	0.5 kg (7.7%)	80 %	4
Grain	Jęczmień palony	0.3 kg (4.6%)	55 %	985
Dodawać na koniec				
Grain	Carafa II	0.1 kg (1.5%)	70 %	812
Dodawać na koniec				

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	El Dorado	10 g	60 min	15 %
Boil	El Dorado	15 g	30 min	15 %
Boil	Citra	15 g	15 min	12 %
Boil	El Dorado	15 g	15 min	15 %
Aroma (end of boil)	Citra	15 g	0 min	12 %
Dry Hop	HBC472	30 g	4 day(s)	9.3 %

Dry Hop	Pink boots	30 g	2 day(s)	12.4 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	150 ml	Fermentum Mobile