

## BLACK IPA/CDA #29

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- Gravity **16.4 BLG**
- ABV ---
- IBU **89**
- SRM **35.5**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.3 liter(s)**

### Mash information

- Mash efficiency **76.1 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **27.8 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **5 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **21.4 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **26.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - pilzneński	4 kg (61.8%)	80.5 %	4
Grain	Bruntal - pilzneński	1.37 kg (21.2%)	81 %	4
Grain	Bruntal - pale ale	0.2 kg (3.1%)	79 %	6.5
Grain	Weyermann - Carahell	0.25 kg (3.9%)	77 %	26
Grain	Chateau - Biscuit Malt	0.2 kg (3.1%)	79 %	45
Grain	Chateau - Crystal	0.1 kg (1.5%)	78 %	150
Grain	Weyermann - Carafa II Special	0.35 kg (5.4%)	65 %	1150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	60 min	8.5 %
Boil	Chinook	10 g	60 min	12.4 %
Boil	Chinook	30 g	20 min	11.2 %
Boil	Citra	20 g	20 min	13.5 %
Aroma (end of boil)	Cascade	11 g	7 min	5.9 %

Aroma (end of boil)	Styrian Golding	25 g	7 min	3.9 %
Aroma (end of boil)	Centennial	20 g	7 min	8.5 %
Aroma (end of boil)	Galaxy	10 g	7 min	14.5 %
Aroma (end of boil)	Mosaic	15 g	7 min	11.7 %
Dry Hop	Citra	30 g	4 day(s)	12 %
Dry Hop	Citra	30 g	4 day(s)	13.5 %
Dry Hop	Centennial	7 g	4 day(s)	8.5 %
Dry Hop	Styrian Golding	15 g	4 day(s)	3.9 %
Dry Hop	Mosaic	11 g	4 day(s)	11.7 %
Dry Hop	Galaxy	6 g	4 day(s)	14.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	230 ml	---

## Extras

Type	Name	Amount	Use for	Time
Fining	irish moss	3 g	Boil	7 min
Water Agent	Gips	6 g	Mash	---
Other	fosforan diamonu	3 g	Boil	30 min

## Notes

- Carafa II special dodawana przed mash-outem  
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