

## BLACK IPA/CDA #40

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- Gravity **17.1 BLG**
- ABV ---
- IBU **79**
- SRM **28.2**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.6 liter(s)**

### Mash information

- Mash efficiency **78.65 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **20.2 liter(s)**
- Total mash volume **26.6 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **20.2 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bruntal - pilzneński	5.5 kg (85.9%)	81 %	4
Grain	Weyermann - Carapils	0.15 kg (2.3%)	75 %	4
Grain	Weyermann - Abbey	0.25 kg (3.9%)	75 %	45
Grain	Chateau - Crystal	0.1 kg (1.6%)	78 %	160
Grain	Weyermann - Carafa II Special	0.4 kg (6.3%)	65 %	1150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Topaz	15 g	60 min	15.5 %
Boil	Amarillo	30 g	20 min	7.5 %
Boil	Simcoe	30 g	20 min	13.3 %
Aroma (end of boil)	Amarillo	30 g	7 min	7.5 %
Aroma (end of boil)	Simcoe	30 g	7 min	13.3 %
Aroma (end of boil)	Cascade	30 g	7 min	7.1 %
Dry Hop	Amarillo	30 g	4 day(s)	7.5 %
Dry Hop	Simcoe	65 g	4 day(s)	13.3 %

Dry Hop	Casacade	20 g	4 day(s)	7.1 %
Dry Hop	Fuggles	30 g	4 day(s)	4.5 %
Dry Hop	Target	20 g	4 day(s)	9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	140 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	irish moss	3 g	Boil	7 min
Water Agent	Gips	2 g	Mash	---
Water Agent	kwas mlekowy 80% [ml]	1 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Water Agent	węglan wapnia/kreda	9 g	Mash	---
Water Agent	sól epsom	2 g	Mash	---

## Notes

- chmiele w workach bez whirlpoola  
słód Carafa II special od początku zacierania  
*Mar 12, 2017, 8:40 PM*