

# BLACK IPA/CDA v3 #51

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- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **75**
- SRM **32**
- 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 **77.3 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.5 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **20.1 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 **77C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking - pilzneński	5.5 kg (86.1%)	80 %	4
Grain	Weyermann - Carapils	0.15 kg (2.3%)	75 %	4
Grain	Weyermann - Abbey	0.185 kg (2.9%)	75 %	45
Grain	Chateau - Crystal	0.15 kg (2.3%)	78 %	160
Grain	Weyermann - Carafa III Special	0.4 kg (6.3%)	65 %	1400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Topaz	15 g	60 min	15.5 %
Boil	Simcoe	30 g	20 min	13.1 %
Boil	Amarillo	30 g	15 min	8.8 %
Aroma (end of boil)	Amarillo	30 g	5 min	8.8 %
Aroma (end of boil)	Simcoe	30 g	5 min	13.1 %
Aroma (end of boil)	Cascade	30 g	5 min	7.1 %
Dry Hop	Amarillo	30 g	3 day(s)	8.8 %
Dry Hop	Simcoe	65 g	3 day(s)	13.1 %

Dry Hop	Casacade	20 g	3 day(s)	7.1 %
Dry Hop	Centennial	35 g	3 day(s)	9.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	160 ml	Fermentum Mobile
2 pokolenie po warce (49)				

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	2 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	1.95 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Water Agent	węglan wapnia/kreda	9 g	Mash	---
Water Agent	sól epsom	3 g	Mash	---
Fining	irish moss	3 g	Boil	5 min